

Figure 8. *Psidium acidum*: **A.** Flowering branch. **B.** Detail of winged twig. **C.** Closed flower bud. **D.** Two views of anther with multiple glands. **E.** Flower after anthesis. **F.** Fruit, whole and sectioned. **G.** Seeds. **H.** Map of distribution (scale = 200 km). (A–E from Perea *et al.* 2008, ASU0005139; F & G from Cerón 3634, ASU0005129). Illustration by Bobbi Angell.

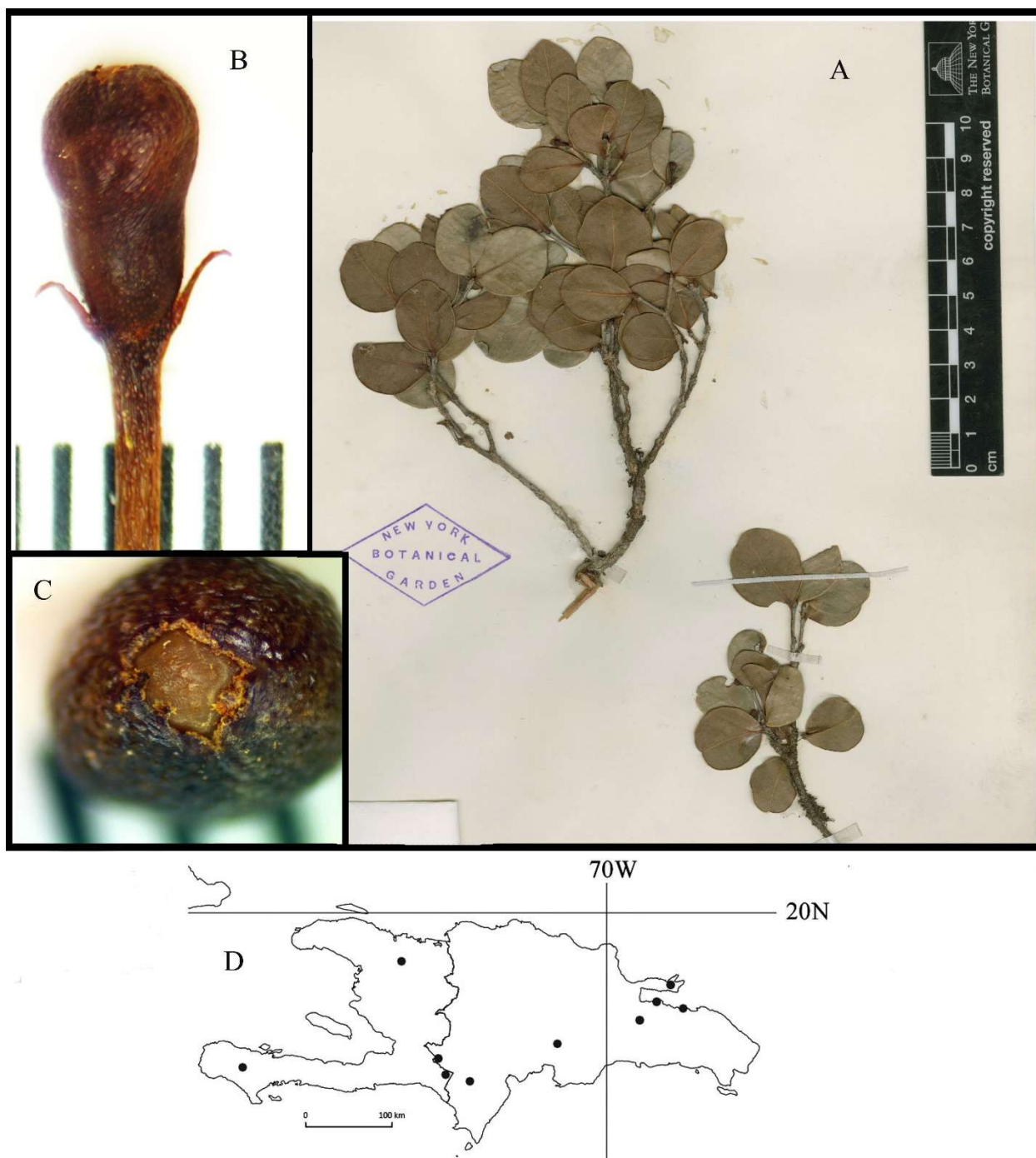


Figure 9. *Psidium acranthum*: **A.** Herbarium sheet. **B.** Side view of closed flower bud. **C.** Apical view of closed flower bud. **D.** Map of distribution (scale = 100 km). (A from Abbott 1247, lectotype, NY; B & C from García *et al.* 4447, ASU0069454).

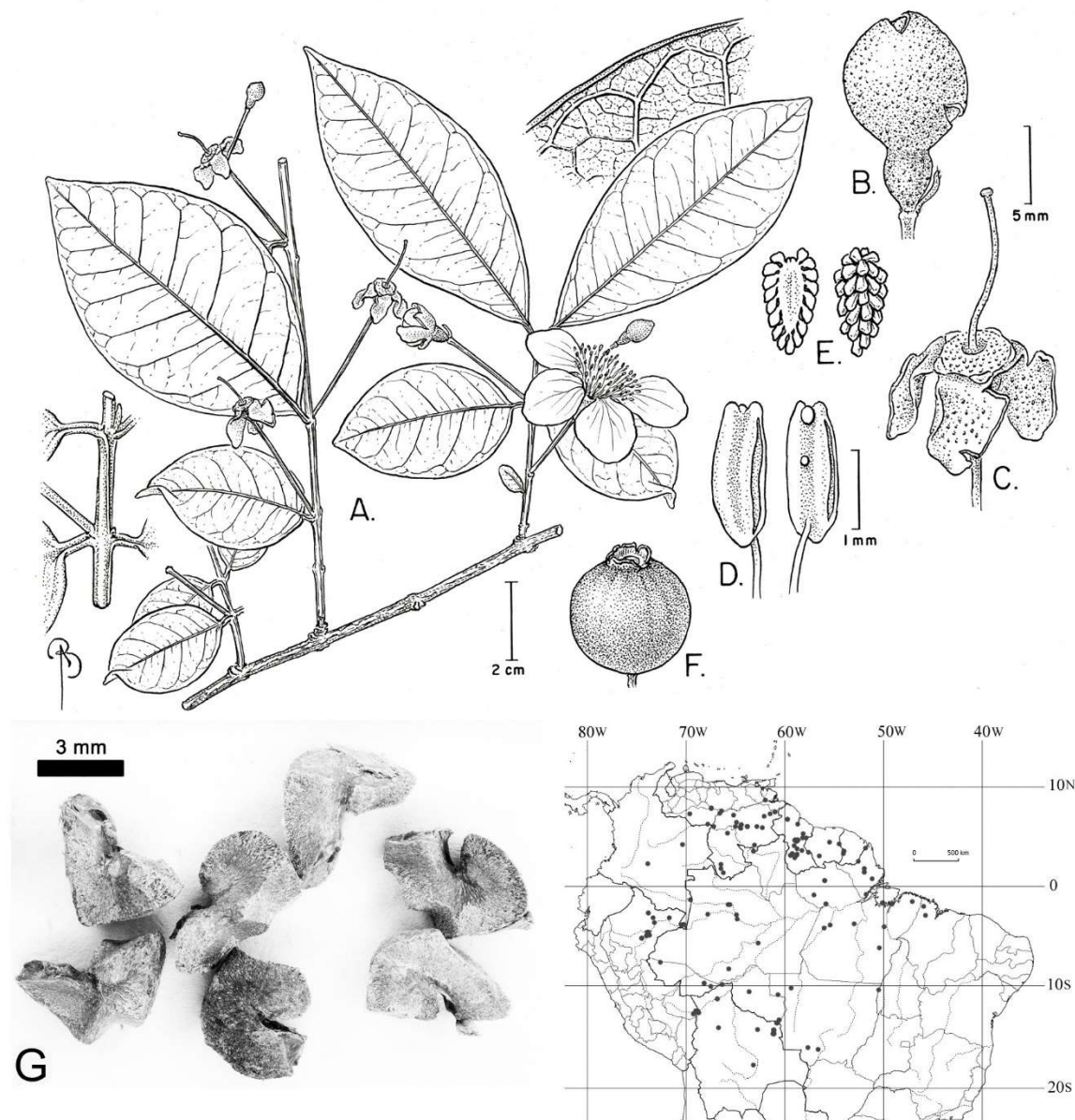


Figure 10. *Psidium acutangulum*: **A.** Branch with flowers at various stages; uniflorous and dichasial inflorescences; detail of leaf venation and winged twigs. **B.** Flower bud beginning to open; with one persistent bracteole. **C.** Flower after anthesis showing irregular opening of calyx. **D.** Two views of anther, showing terminal gland and additional gland below. **E.** Two views of peltate placenta with ovules, outwardly directed on right, inwardly directed on left (placenta attachment not included would be a membrane near center of left view). **F.** Fruit with the calyx mainly detached. **G.** Angular shaped seeds. **H.** Map of distribution (scale = 500 km). (A–C from Oliveira 572, ASU0005124; D from Huamantupa 7813, ASU0018795; E from Foster 738, ASU0005150; F from Mutchnick 1041, ASU0005090; G from Mutchnick 1275, ASU0005080). Illustration by Bobbi Angell.

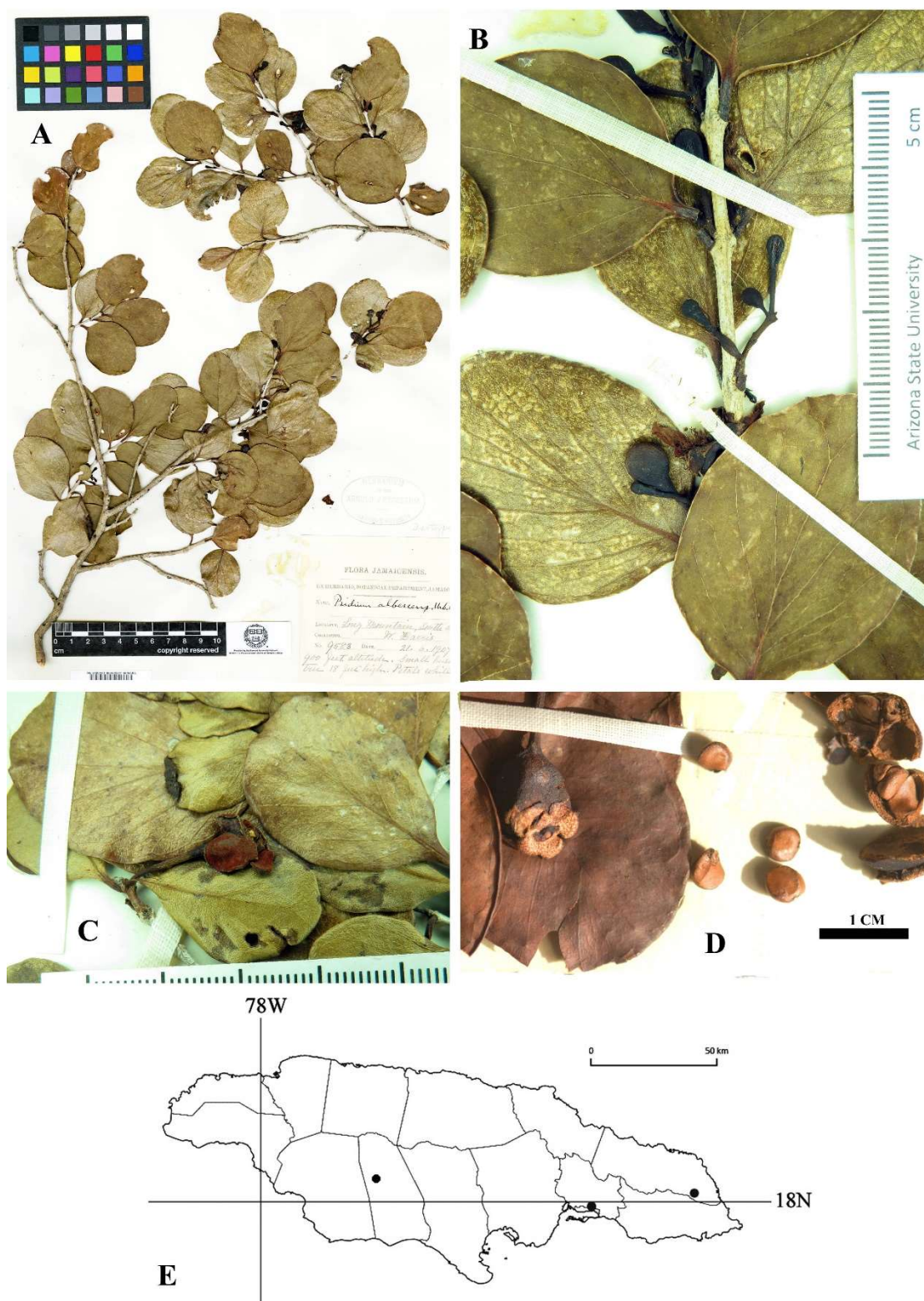


Figure 11. *Psidium albescens*: **A.** Herbarium sheet, lectotype. **B.** Twig with flower buds and leaves, the lateral veins ascending. **C.** Leaves with flower past anthesis showing reddish brown indumentum on inner surface of calyx. **D.** Fruits opened and closed; seeds from open fruit. **E.** Map of distribution (scale = 50 km). (A, B & C from lectotype, Harris 9583 at NY; D from Proctor 14836 at IJ, photo by K. Campbell).

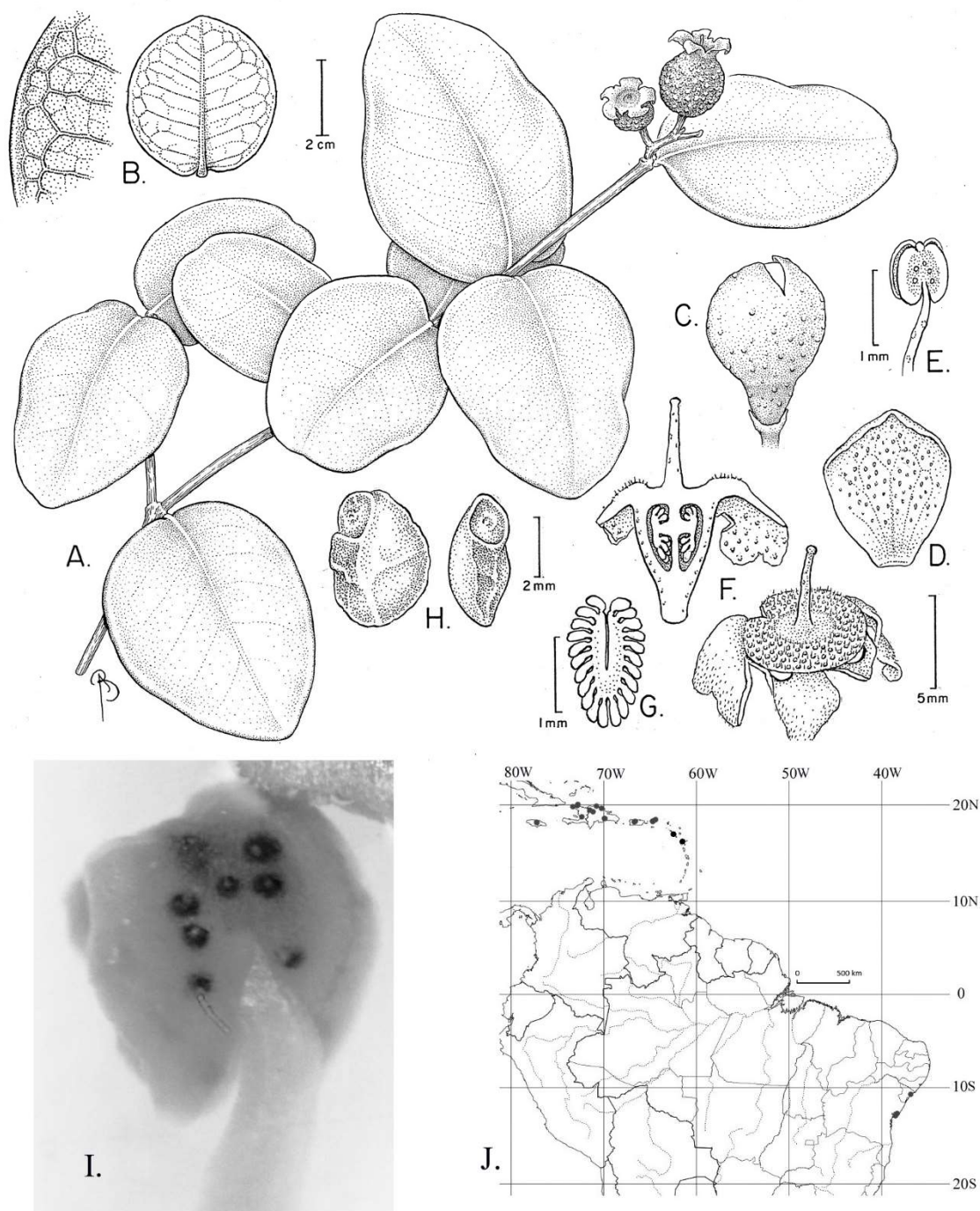


Figure 12. *Psidium amplexicaule*: **A.** Twig with leaves and fruits. **B.** Leaf with close-up of venation. **C.** Opening flower bud. **D.** Petal. **E.** Anther with terminal gland and smaller glands below. **F.** Distal view of flower after anthesis and longitudinal section of the same showing peltate placenta from side. **G.** View of peltate placenta and ovules. **H.** Two views of a seed. **I.** Photo of anther with glands. **J.** Map of distribution (scale = 500 km). (A from Acevedo-Rodríguez 2673, NY; B & H from Mejía and Zanoni 7878, ASU0004806; C from Acevedo-Rodríguez 2862, NY; D–G from Peguero *et al.* 1370, ASU0069442; I from Liogier 17385, MICH). Illustration by Bobbi Angell, modified from Acevedo-Rodríguez 1996, Fig. 154.

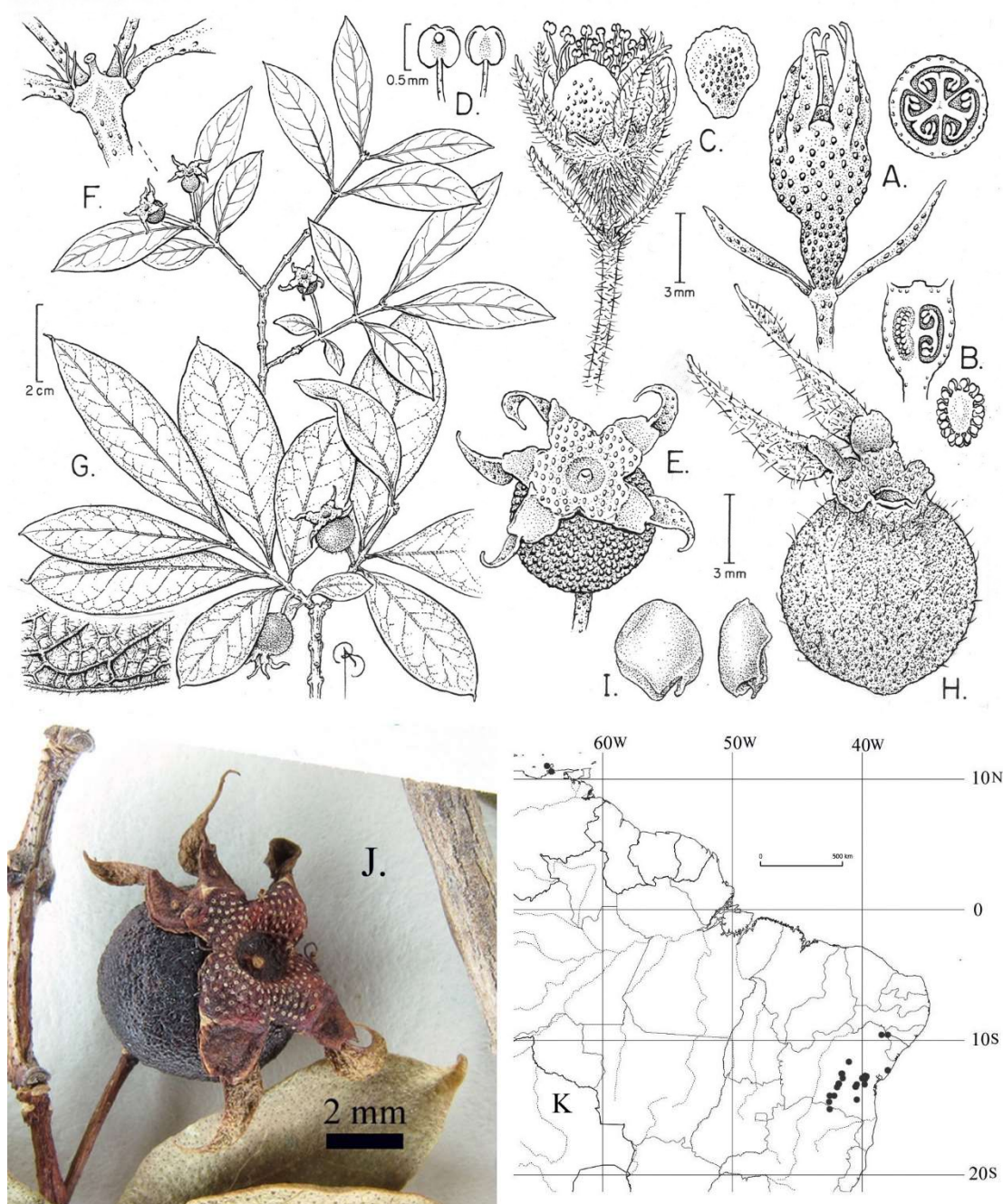


Figure 13. *Psidium appendiculatum*: **A.** Essentially glabrous flower bud showing how proximal portion of calyx encloses the closed corolla; flange-like appendages protrude from calyx apex. **B.** Cross section of ovary above showing 2 rows of ovules on each lamella of placenta; longitudinal section of ovary and extracted placenta with ovules; all about 2 times size of **A.** **C.** Pubescent open flower and petal. **D.** Anther with a terminal gland. **E.** Fruit from above showing tears cutting through the staminal ring. **F.** Close-up of node showing stipule-like colleters in leaf axils. **G.** Branch with fruits with a close-up of the venation pattern. **H.** Fruit with two persistent calyx lobes. **I.** Two views of a seed with persistent remnant of placenta. **J.** Young fruit with persistent calyx. **K.** Map of distribution (scale = 500 km). (**A** & **B** from Melo *et al.* 1426, HUEFS; **C** & **D** from Melo *et al.* 1853, HUEFS; **E**, **F**, & **J** from França *et al.* 5120, ASU0005176; **G**–**I** from Nic Lughadha & Queiroz H-53360, ASU0018723). Illustration by Bobbi Angell.

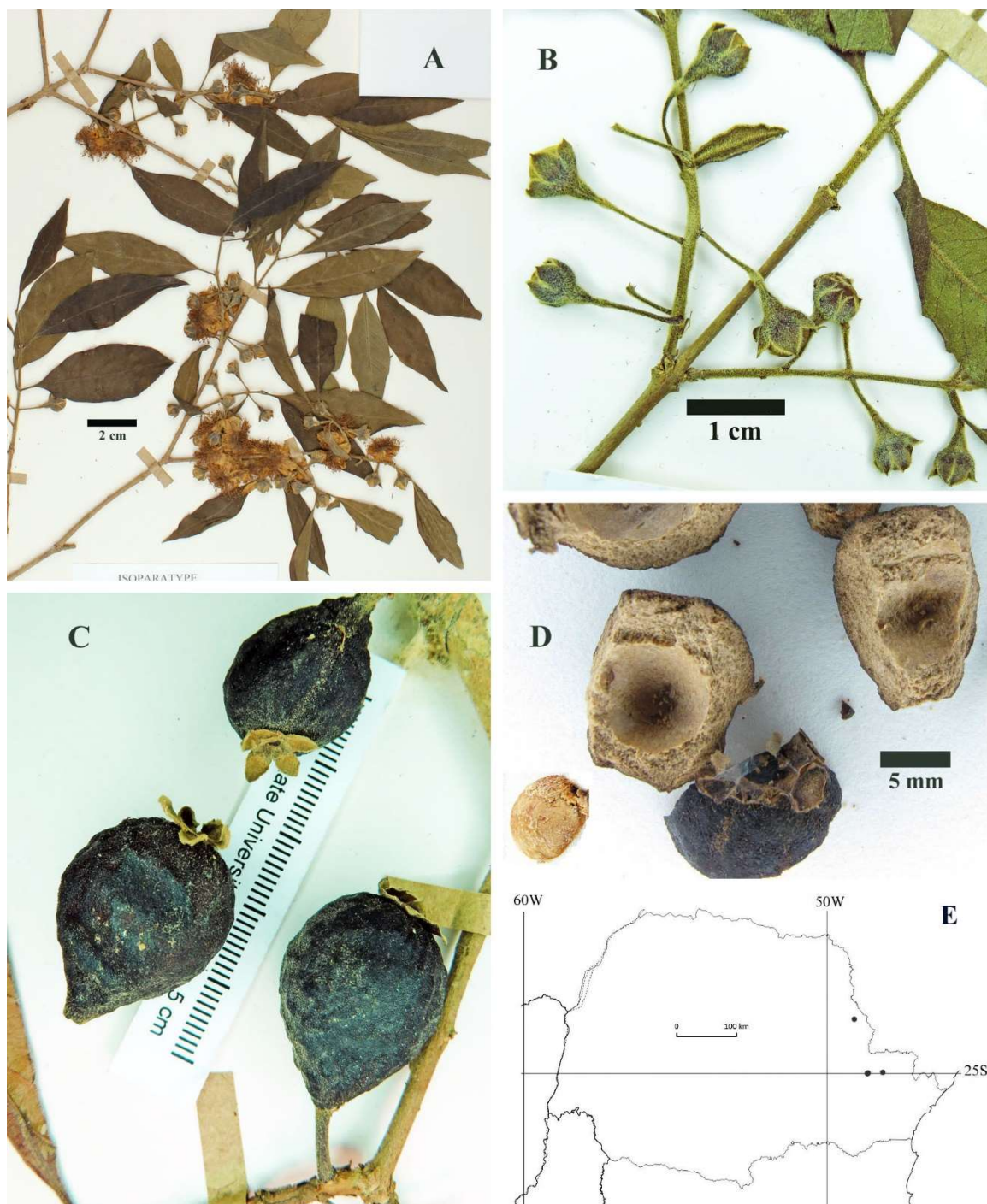


Figure 14. *Psidium araucanum*. **A.** Twigs with young leaves and flowers. **B.** Flower buds just before anthesis. **C.** Fruits. **D.** Portions of fruit wall showing thick fruit wall and a seed. **E.** Map of distribution (scale = 100 km). (A & B from Hatschbach 40353, MBM; C from Landrum 4104, MBM; D from Silva & Abe 2881, ASU0005382).

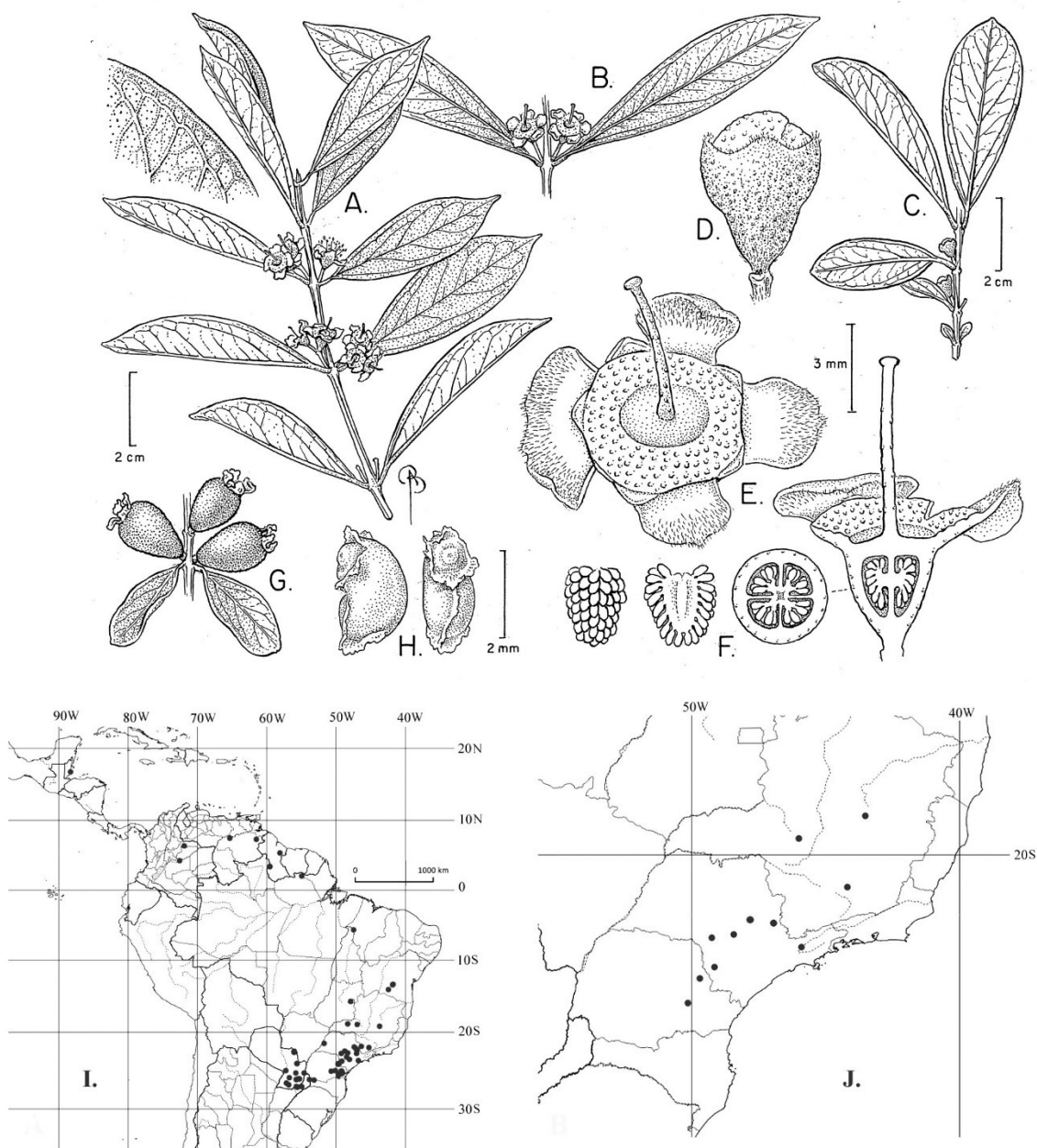


Figure 15. *Psidium australe*: **A.** Flowers, twig, and portion of leaf showing venation. **B.** Twig, leaves, and old flowers. **C.** Twig, leaves and flower buds. **D.** Closed flower bud. **E.** Distal view of flower after anthesis. **F.** Longitudinal section of flower bud; cross section of ovary; extracted placenta and ovules: adaxial view on right and abaxial view on left. **H.** Two views of seed with remnants of endocarp attached. **I.** Distribution of *P. australe* var. *australe* (scale = 1000 km). **J.** Distribution of *P. australe* var. *argenteum*. (A, E, & F from Silva 739, ASU0005175; B from Hatschbach 55798, ASU0005167; C & D from Landrum 8798, ASU0005172; G from Zardini 9027, ASU0005408; H from Oliveira 359, ASU0005409). Illustration by Bobbi Angell.

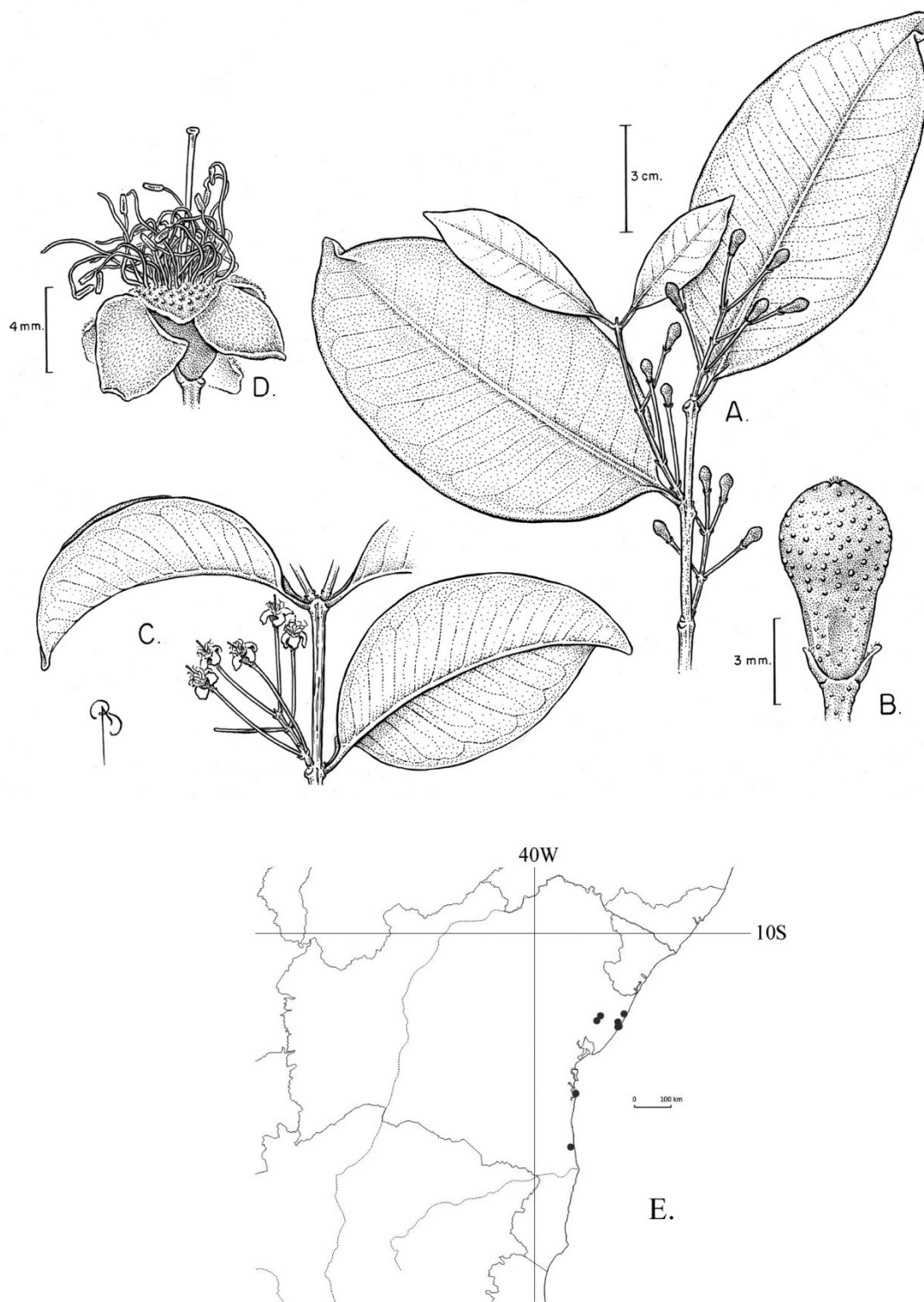


Figure 16. *Psidium bahianum*: **A.** Twig with leaves and bracteate shoot inflorescences, one of which terminates in a pair of immature leaves. **B.** Closed flower bud, showing small terminal pore. **C.** Twig showing arching leaves and inflorescence after anthesis. **D.** Open flower with petals having fallen. **E.** Map of distribution (scale = 100 km). (A & B from *Jesus 1384*, HUEFS, holotype; C & D from *Jesus 1389*, HUEFS). Illustration by Bobbi Angell.

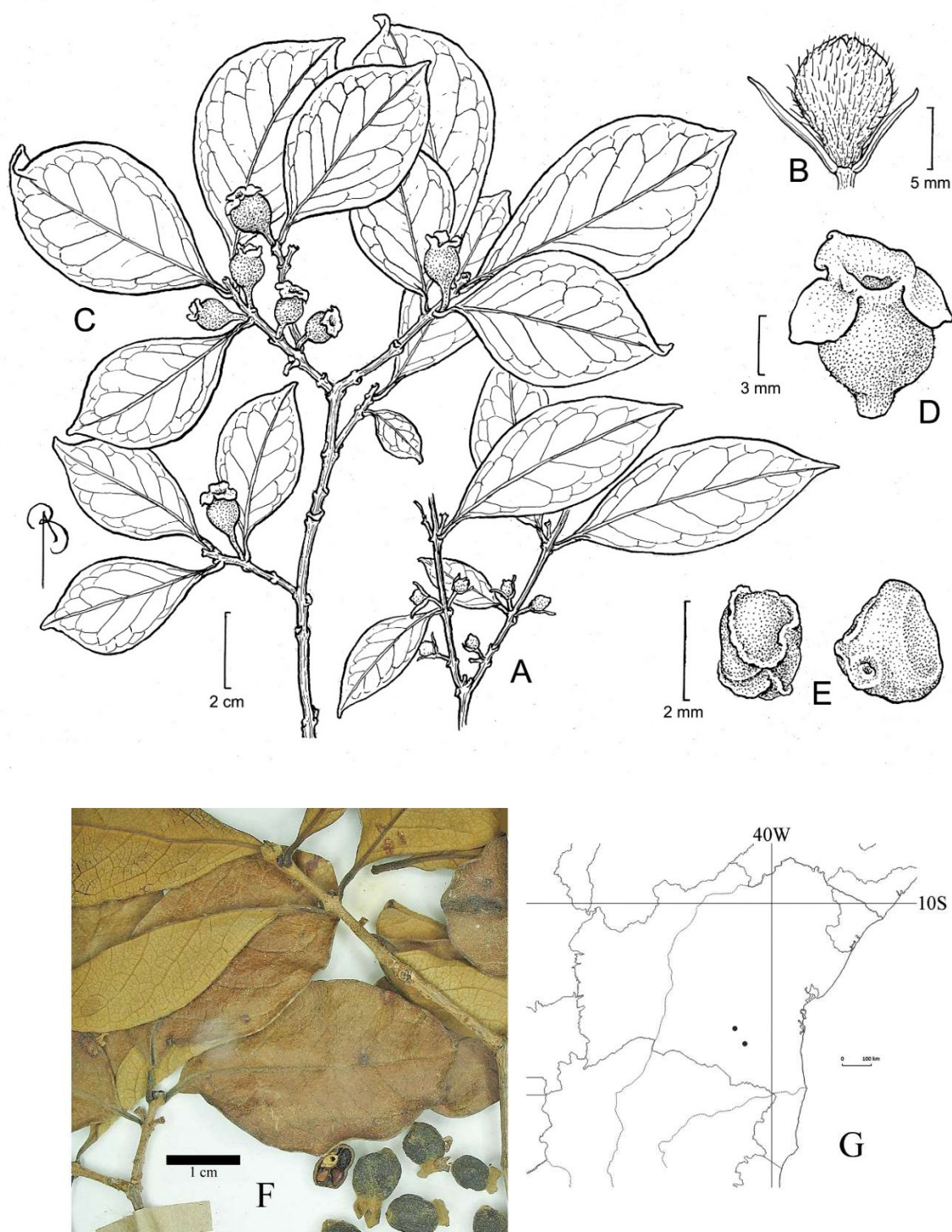


Figure 17. *Psidium brevipedunculatum*: **A.** Branch with leaves and flower buds. **B.** Closed flower bud with linear bracteoles. **C.** Branch with leaves and young fruits. **D.** Young fruit with persistent calyx. **E.** Two views of seed. **F.** Portion of herbarium specimen with leaves, twigs, and fruits. **G.** Map of distribution (scale = 100 km). (A & B from Amorim *et al.* 8407, RB, seen as photo; C from Faria 9112, HEPH, seen as photo. D–F from Oliveira & Lima 124, RB). Illustration by Bobbi Angell.

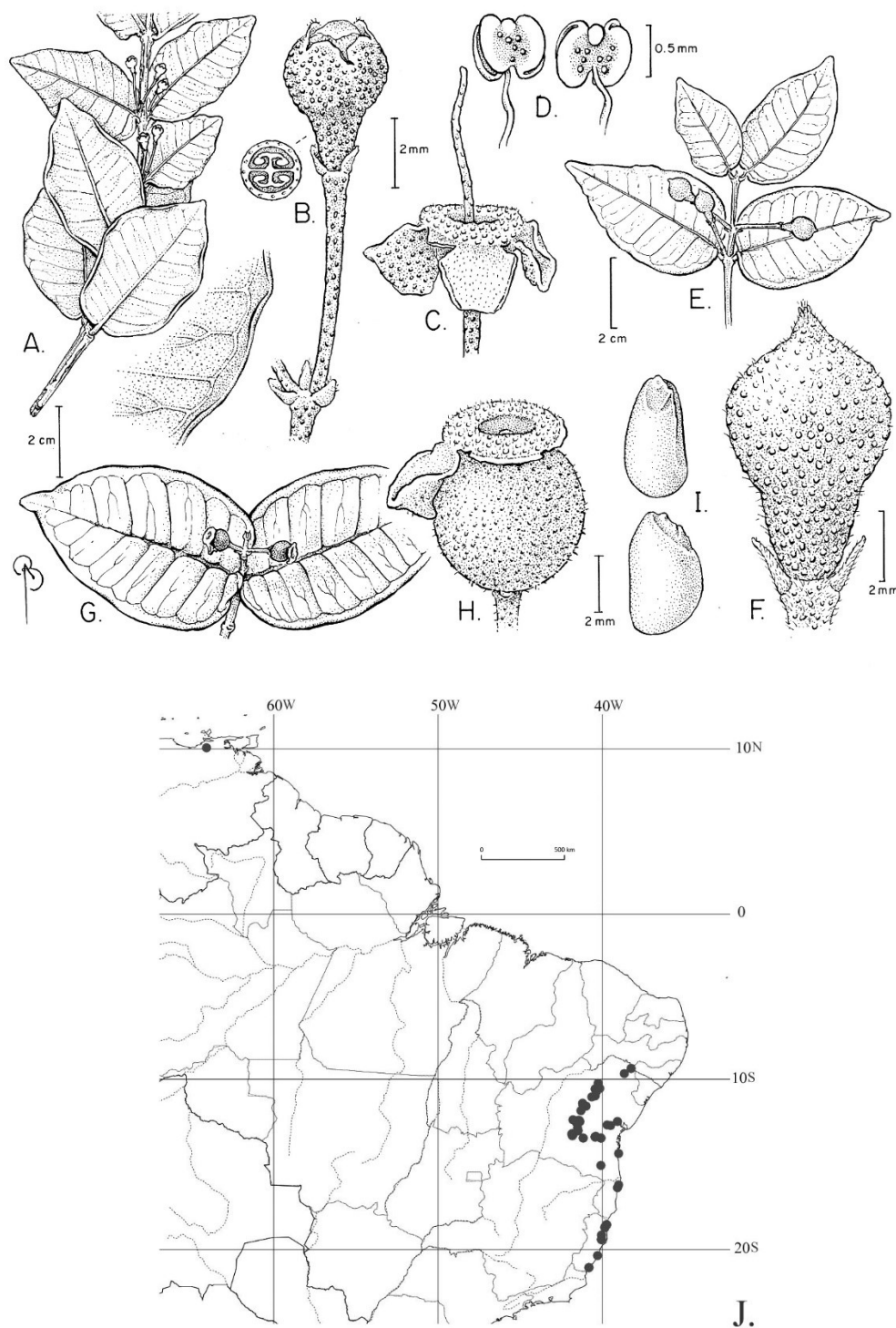


Figure 18. *Psidium brownianum*: **A.** Twig with leaves and flower buds. **B.** Closed flower bud with a 4-lobed calyx; cross section of ovary showing two locules and peltate placenta. **C.** Flower after anthesis. **D.** Anthers with terminal gland and smaller glands below. **E.** Twig with leaves and closed flower buds. **F.** Closed flower bud with calytrate calyx. **G.** Twig with two sessile leaves and two fruits. **H.** Young fruit with persistent calytrate calyx. **I.** Seed from two views. **J.** Map of distribution (scale = 500 km). (A–D from *Hatschbach et al.* 71567, ASU0006083; E & F from *Harley et al.* 50439, ASU0015706; G–I from *Stannard et al.* 51615, ASU0015702). Illustration by Bobbi Angell.

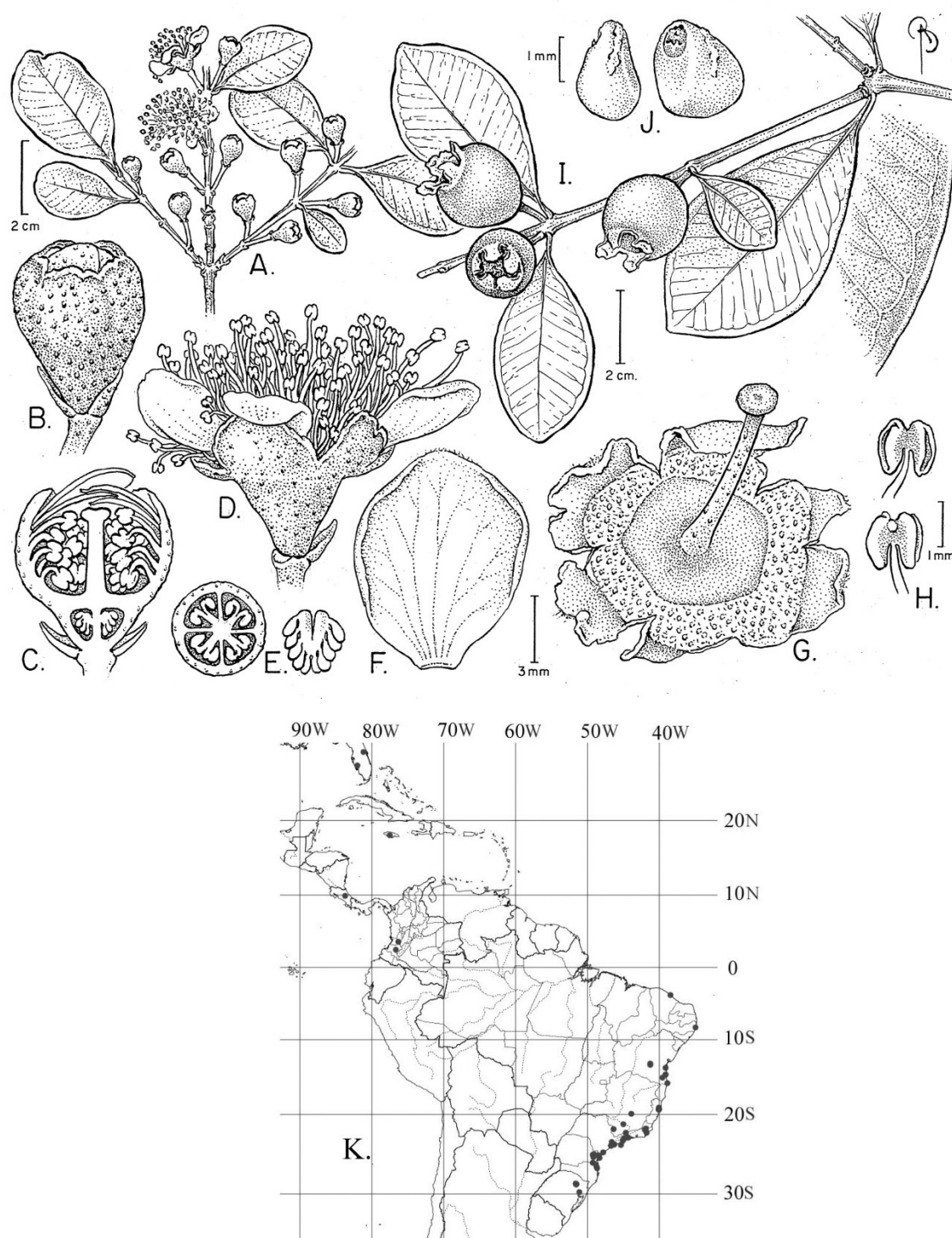


Figure 19. *Psidium cattleianum*: **A.** Twig at beginning of anthesis. **B.** Flower bud. **C.** Longitudinal section of flower bud. **D.** Opening flower. **E.** Cross section of ovary and extracted placenta with ovules. **F.** Petal. **G.** Apical view of flower after anthesis showing tears in calyx cutting into staminal ring. **H.** Two views of stamen and anther with single terminal gland. **I.** Twig with leaves and fruits. **J.** Seeds. **K.** Map of distribution. (A–C from *Rossato et al.* 4855, ASU0006118; D from photograph of live specimen; E–H from *Folli* 4925, ASU0006103; I from *Baitello* 414, ASU0006091; J from *Carvalho et al.* 6859, ASU0006121). Illustration by Bobbi Angell.

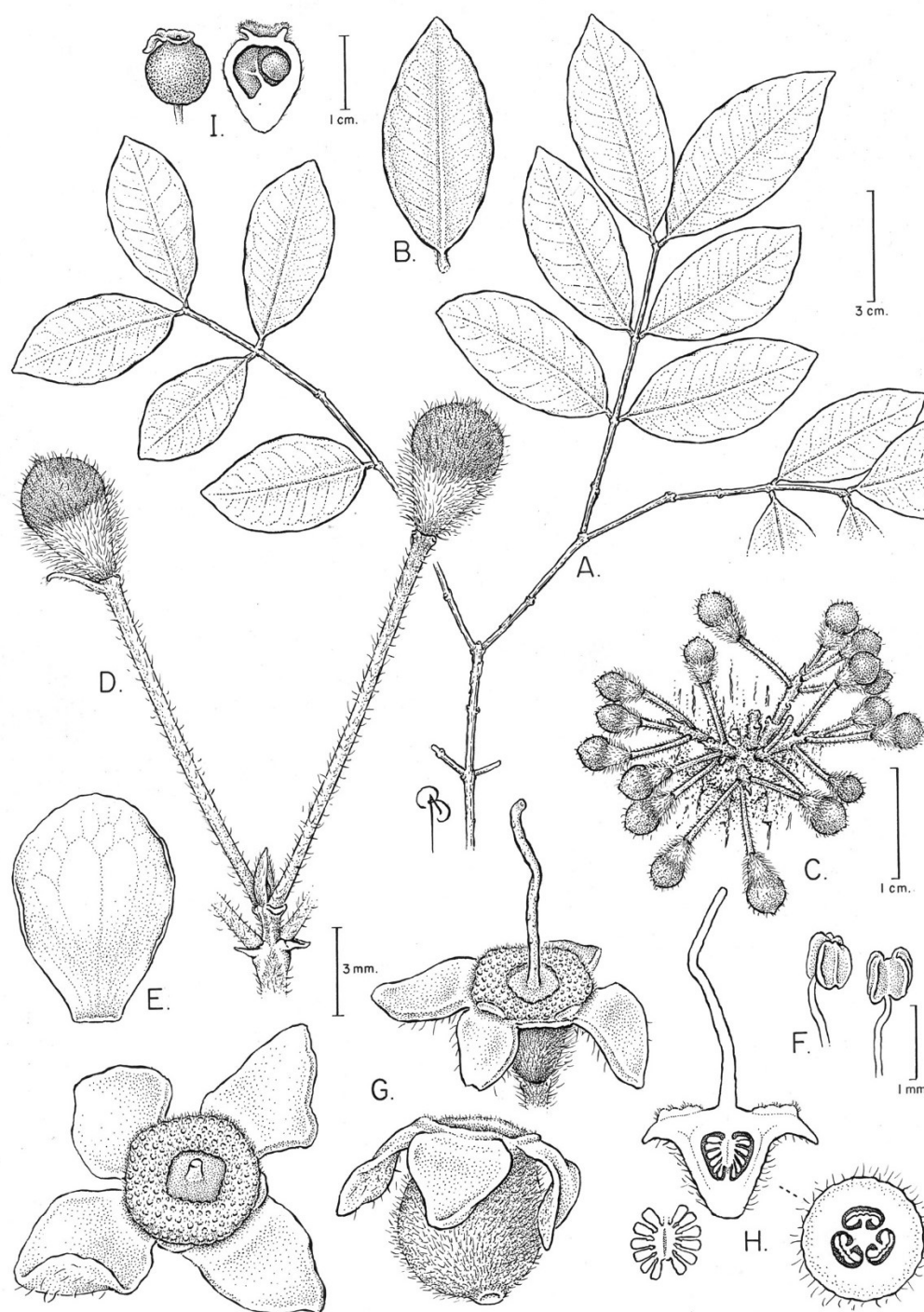


Figure 20. *Psidium cauliflorum*: A. Young branch and leaves. B. Upper surface of single leaf. C. Cauliflorous inflorescence. D. Portion of inflorescence with two closed flower buds. E. Detached petal. F. Anthers. G. Remnants of flowers and young fruit after stamens and petals have fallen. H. Longitudinal section of old flower; cross section of ovary; extracted placenta with ovules. I. Fruit and single seed. (A, B, & I from *Grupo Pedra do Cavalo* 326, ALCB; C from *Grupo Pedra do Cavalo* 955, HRB, the holotype; D–H from *Queiroz et al.* 1742, ASU0019703). See map of distribution in Fig. 76A. Illustration by Bobbi Angell.

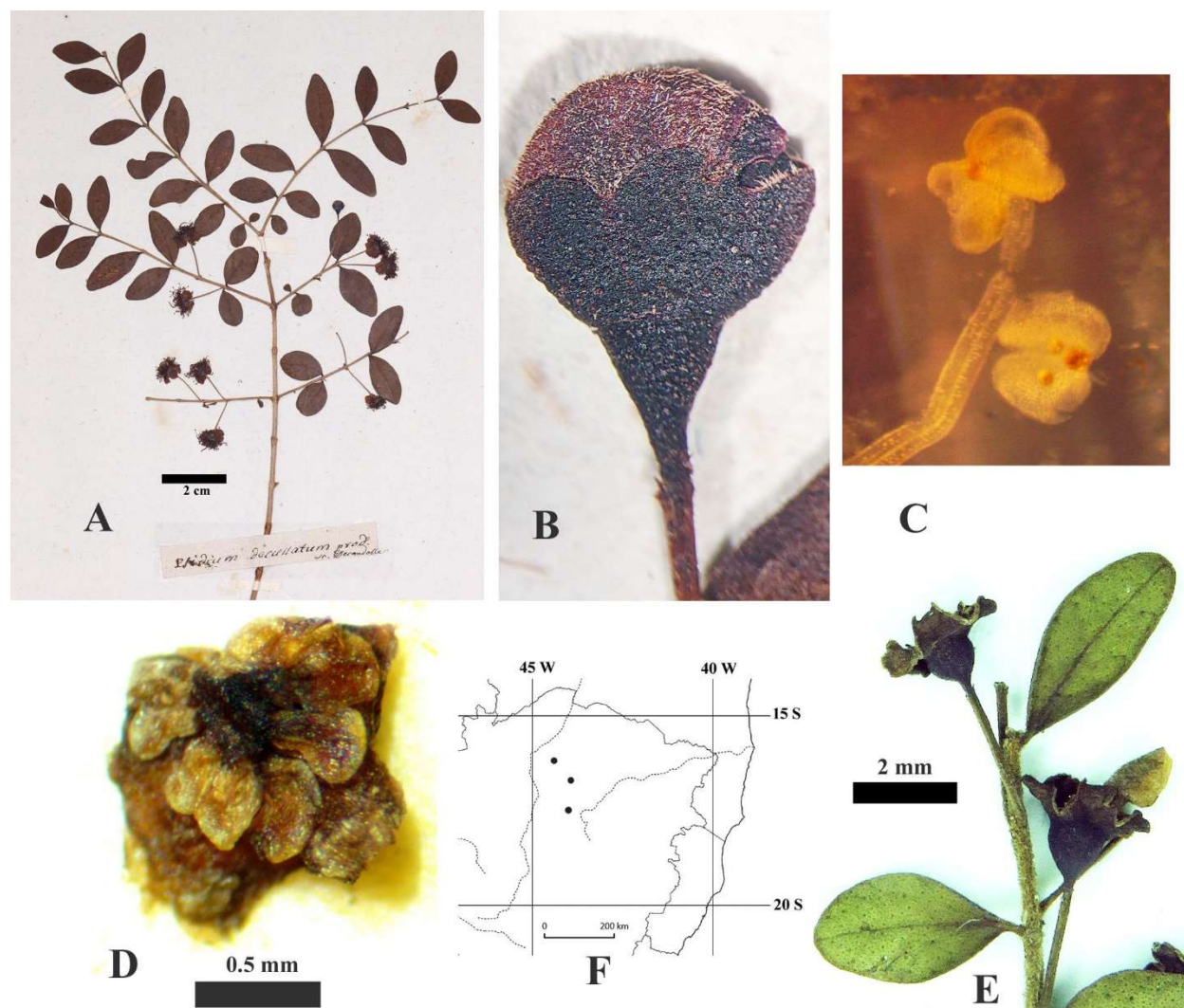


Figure 21. *Psidium decussatum*. **A.** Portion of holotype at M. **B.** Flower bud from holotype, showing cup-like calyx enclosing lower portion of closed corolla. **C.** Anthers, the upper having a single terminal gland and the lower having terminal gland and two additional glands below. **D.** Placenta with ca. 8 ovules attached. **E.** Twig with flowers shortly after anthesis showing tears in calyx. **F.** Map of distribution (scale = 200 km). (A & B from holotype, courtesy of the Botanische Staatssammlung München [M] and photographer Suvrat Kotagal at M; C, D, & E from Pirani *et al.* 3851 at ASU0030918).



Figure 22. *Psidium densicomum*: **A.** Branch with dichasial inflorescences; close-up of node with colleters present in leaf axils. **B.** Closed flower bud. **C.** Flower after anthesis (pubescent), with tears forming between lobes of calyx. **D.** Stamens with glands in some anthers. **E.** Flower after anthesis (subglabrous). **F.** Fruit. **G.** Angular seed; embryo. **H.** Map of distribution (scale = 500 km). (A–D from *Cid 4144*, ASU0006143; E from *Gentry & Perry 78002*, ASU0006142; F, G from *Pipoly et al. 14846*, ASU0006149). Illustration by Bobbi Angell.

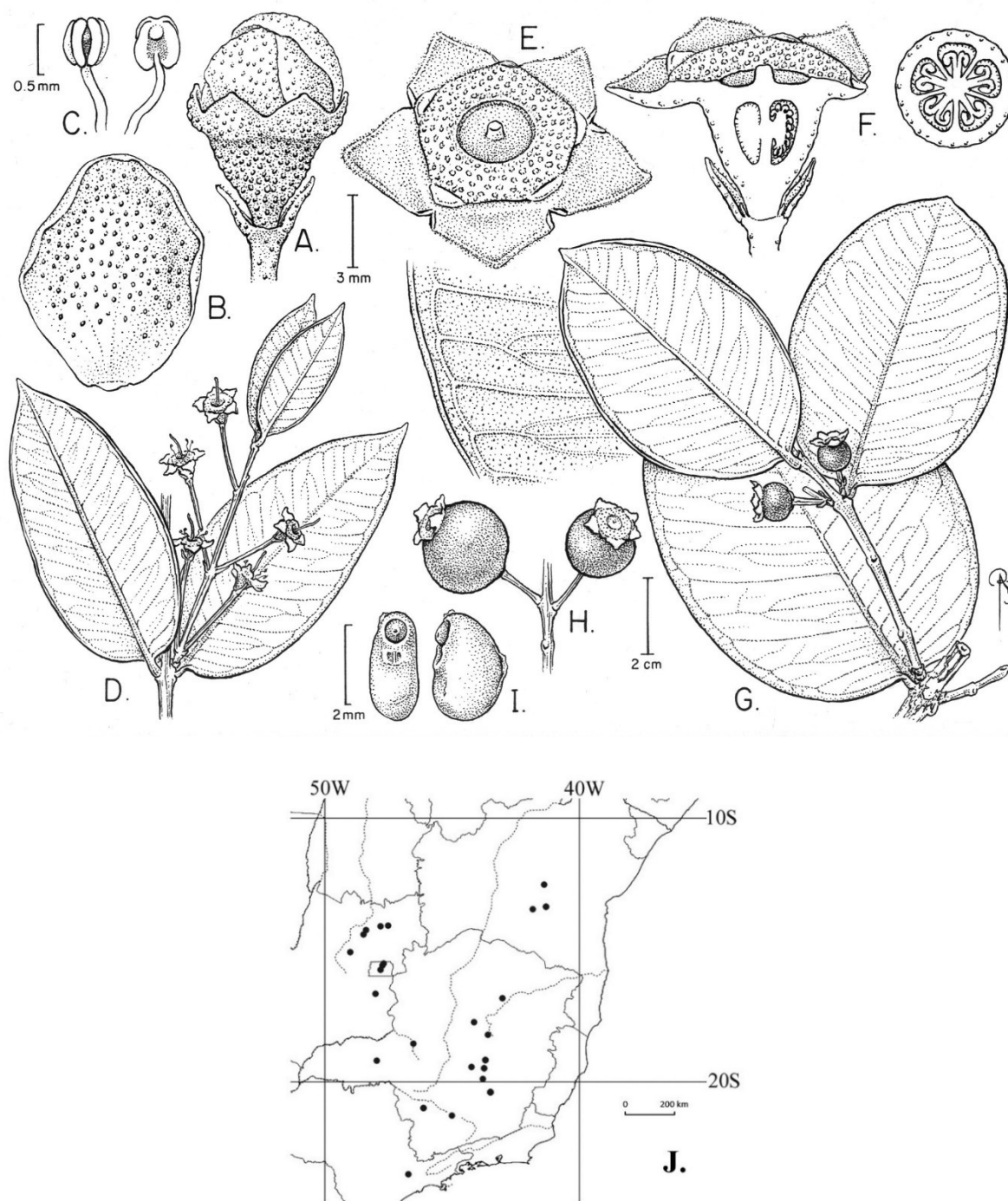


Figure 23. *Psidium firmum*: A. Closed flower bud. B. Petal showing numerous glands. C. Two views of anther with a single terminal gland. D. Flowering twig shortly after anthesis. E. Apex of flower after anthesis showing short tears in calyx that do not penetrate the staminal ring and scars left by stamens and petals. F. Longitudinal and cross section of ovary showing five locules and peltate placenta. G. Twig with leaves and fruits and close-up of venation pattern showing how tertiary veins seem to arise from the marginal vein. H. Fruits with persistent calyx lobes. I. Two views of a seed with operculum near top. J. Map of distribution (scale = 200 km). (A–C from *Filgeiras and Lopes* 2406, ASU0006699; D–F from *Proença et al.* 1445, ASU0006705; G from *Proença et al.* 1467, ASU0006697; H & I from *Irwin et al.* 9189, MICH). Illustration by Bobbi Angell.

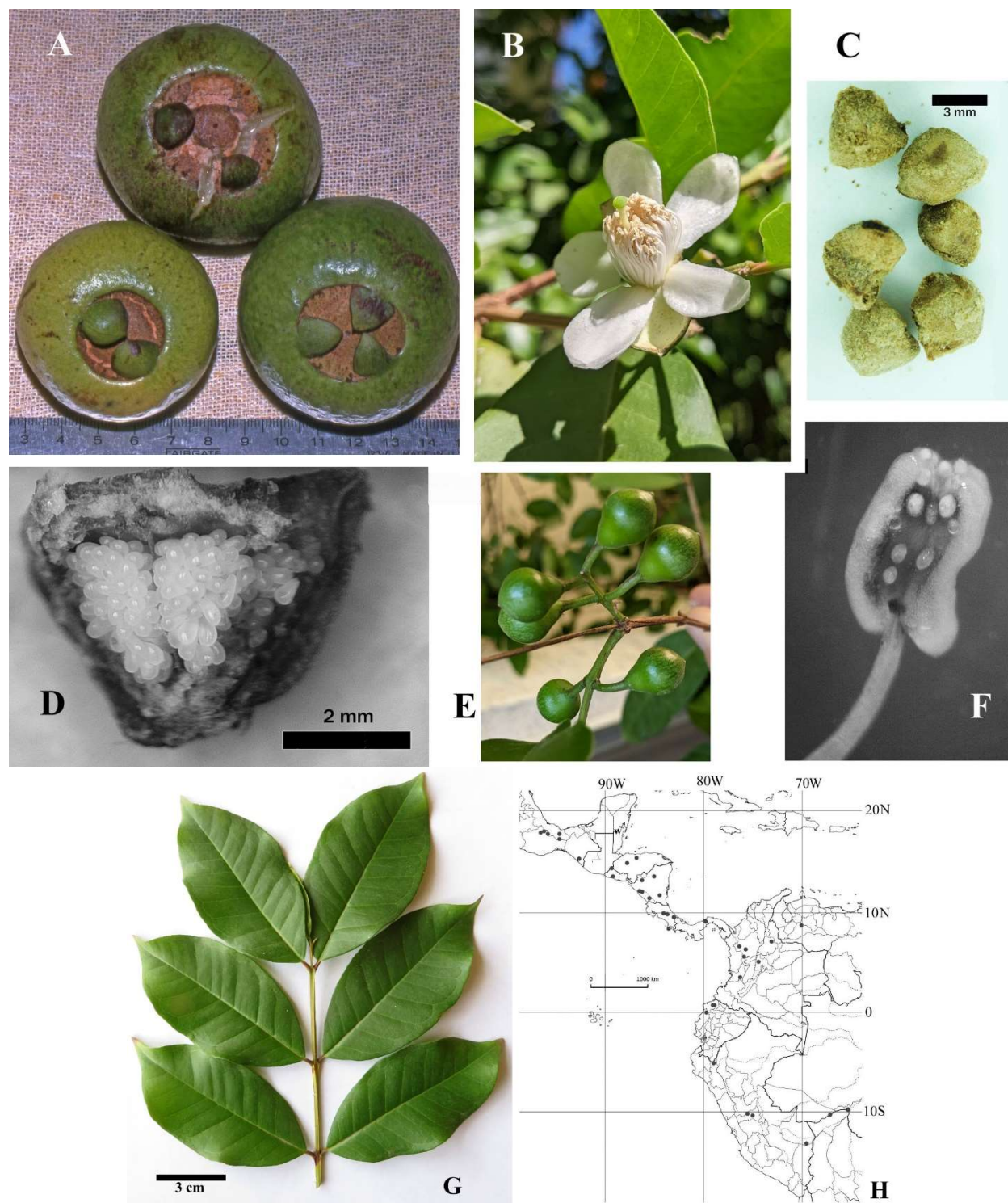


Figure 24. *Psidium friedrichsthalianum*: **A.** Mature fruits. **B.** Opening flower. **C.** Seeds. **D.** Section of ovary showing 2 placentas with ovules. **E.** Flower buds. **F.** Anther with several glands of nearly equal size. **G.** Twig with leaves. **H.** Map of distribution (scale = 1000 km). (A from *Landrum* 6555, ASU0007293; B, D, E, & F from *Landrum* 12321, ASU0310759; C from *Landrum* 6575, ASU0069359; G from *Landrum* 12307, ASU0306935).

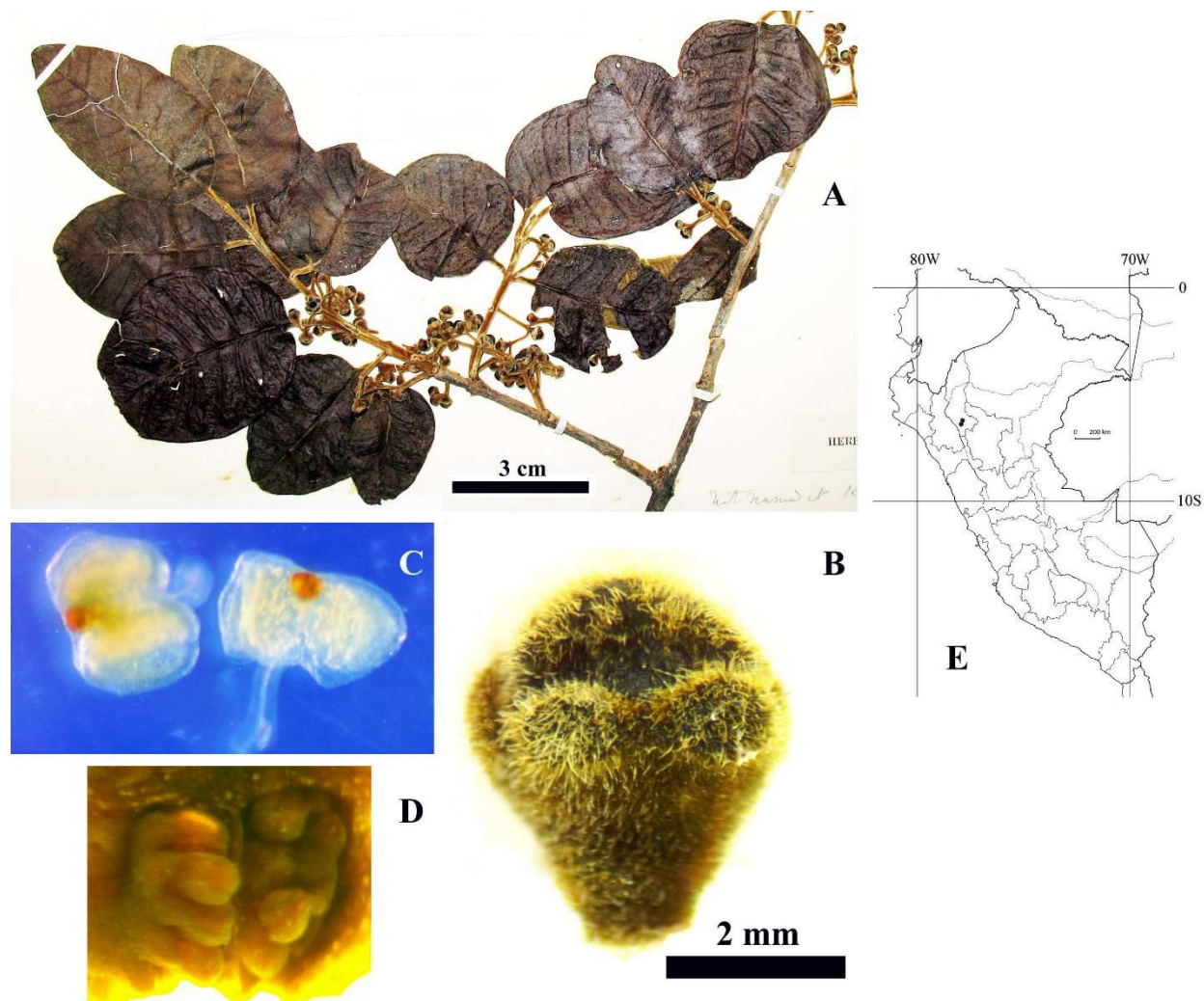


Figure 25. *Psidium fulvum*: **A.** Twigs with leaves and inflorescences from holotype. **B.** Flower bud. **C.** Anthers with terminal glands. **D.** Section of ovary showing ovules from two locules. **E.** Map of distribution (scale = 200 km). (A from holotype, *Mathews s.n.*, BM); B–D from *Vasquez et al.* 25480, ASU0007296).

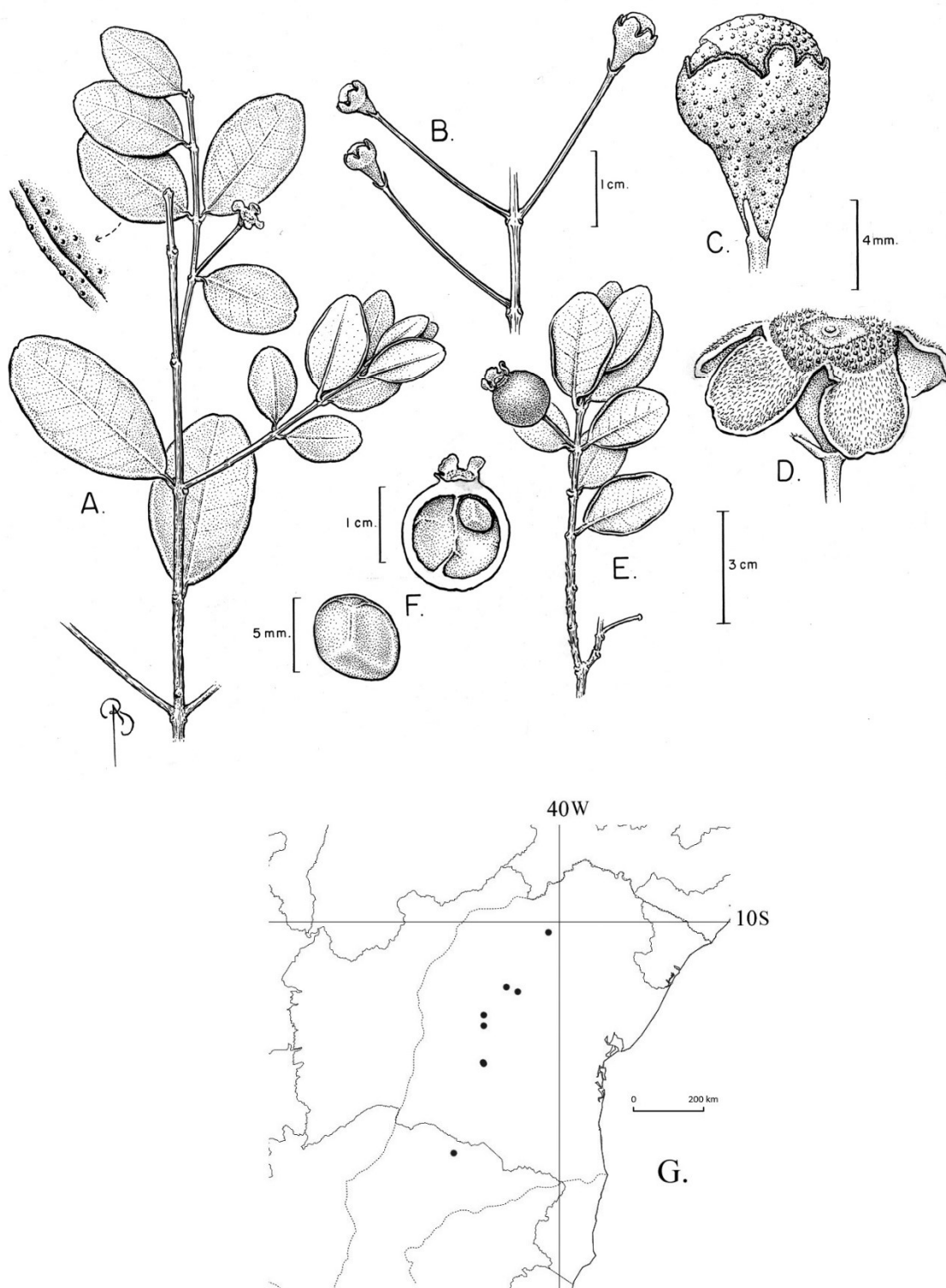


Figure 26. *Psidium ganevii*: **A.** Twig with leaves and old flower. **B.** Portion of a bracteate shoot inflorescence. **C.** Flower bud with tears developing in calyx. **D.** Flower after petals and stamens have fallen. **E.** Twig with leaves and fruit. **F.** Opened fruit and seed. **G.** Map of distribution (scale = 200 km). (A from *Miranda* 90, ASU0007299; B–D from *Ganev* 1518, HUEFS, holotype; E & F from *França et al.* 2834, ASU0057322). Illustration by Bobbi Angell.

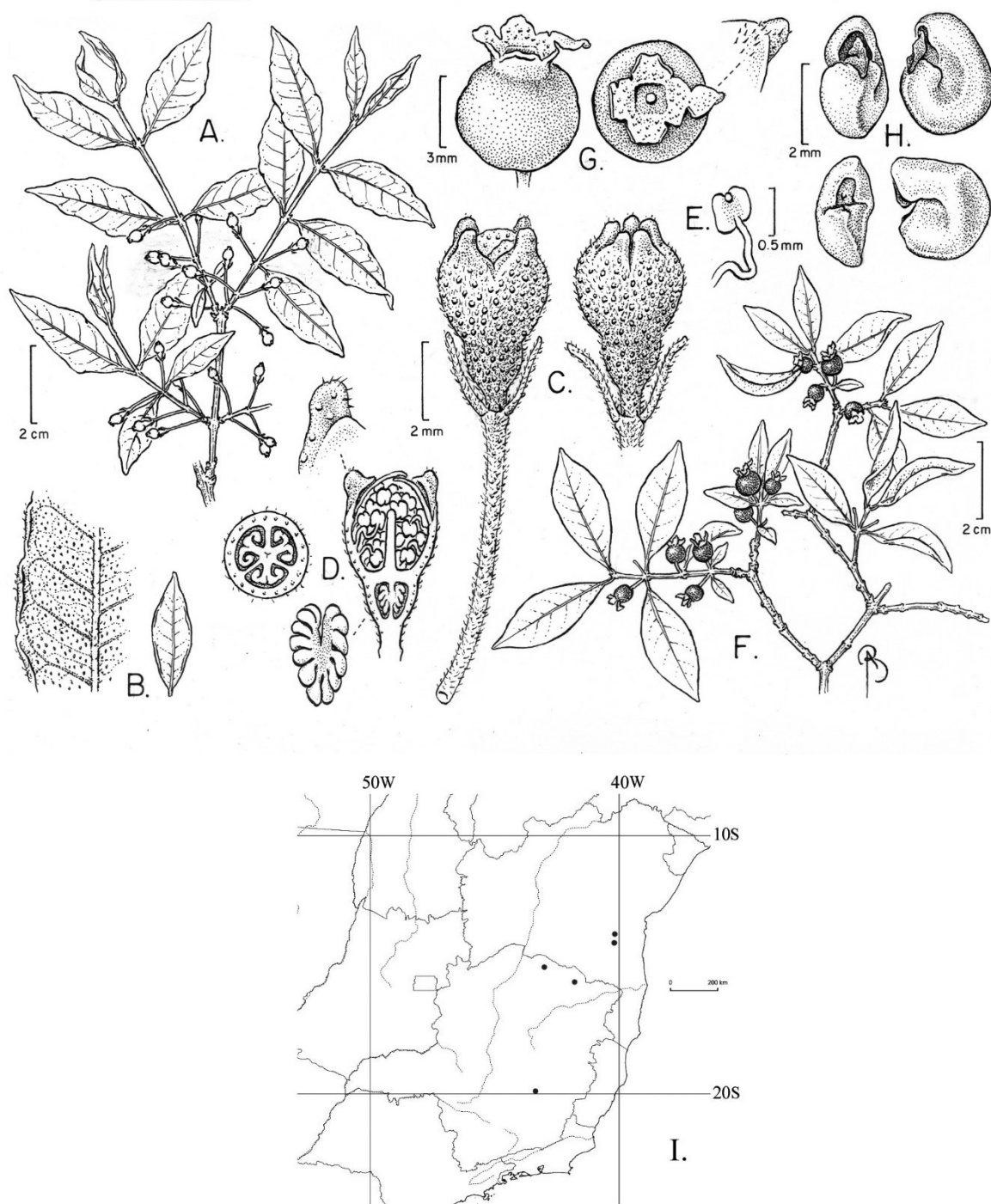


Figure 27. *Psidium glaziovianum*: **A.** Branch with flower buds. **B.** Typical leaf with close-up of lower surface. **C.** Two flower buds, 4-merous on left and 5-merous on right. **D.** Longitudinal section of flower bud; cross section of ovary; placenta and with ovules extracted. **E.** Anther with terminal gland. **F.** Branch with fruits. **G.** Fruit from side and above showing tears in staminal ring. **H.** Views of two immature seeds. **I.** Map of distribution (scale = 200 km). (A–E from Mori *et al.* 11212, NY; F & H above from Taylor *et al.* 1466, ASU0030919; G & H below from Mattos Silva *et al.* 281, ASU0075447). Illustration by Bobbi Angell.

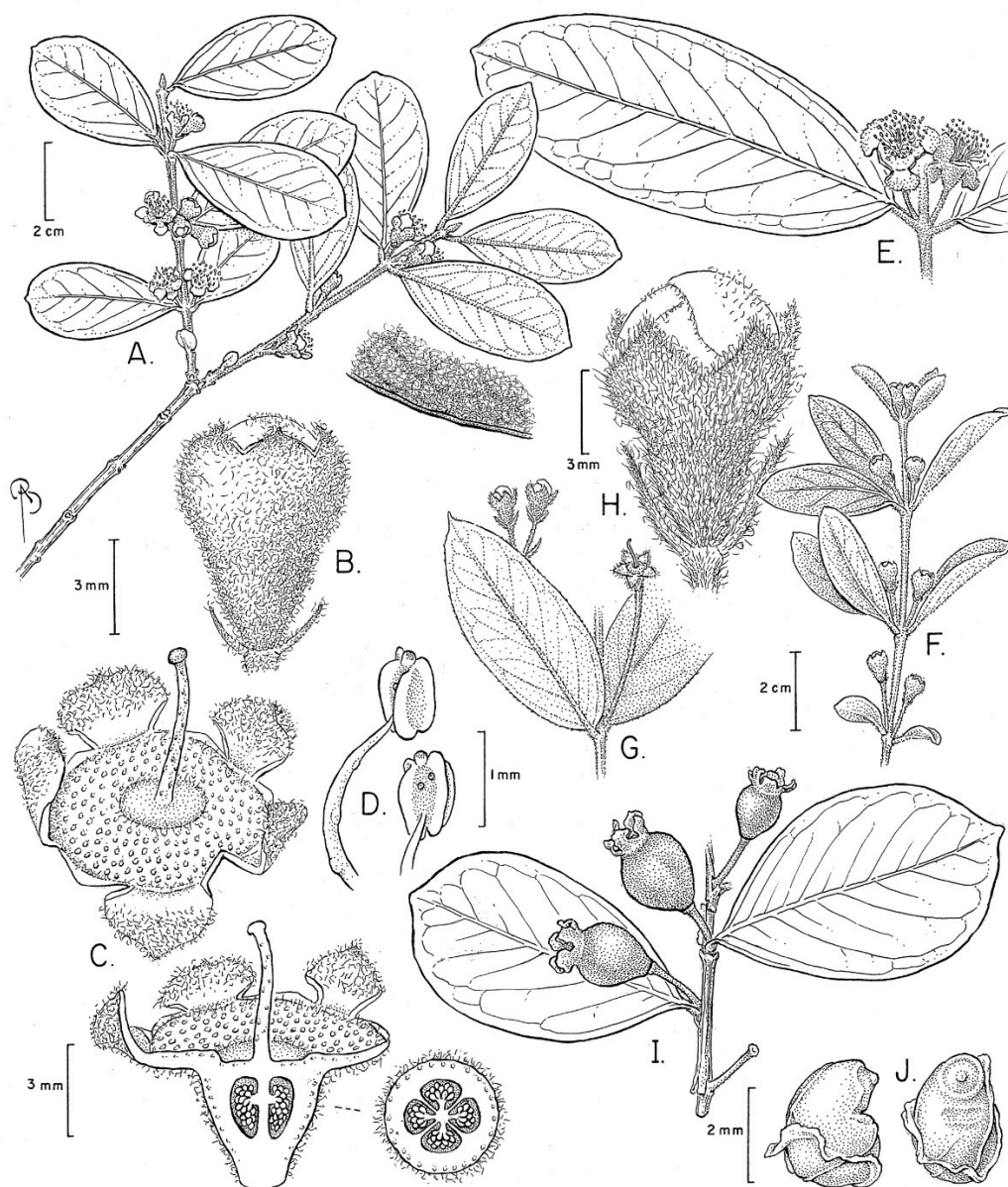


Figure 28. *Psidium grandifolium*. **A.** Branch with leaves, flower buds, and open flowers; detail of lower leaf surface. **B.** Closed flower bud. **C.** Apex of flower after anthesis, tears in the calyx scarcely cutting the staminal ring; longitudinal and cross sections of similar flowers. **D.** Two views of anther with terminal gland and 2 smaller glands below. **E.** Node with two leaves and two open flowers. **F.** Shoot with 3-leaved whorls at 2 nodes and flower buds. **G.** Node with 2 leaves; 2 flower buds (part of a dichasium) and a single flower after anthesis. **H.** Closed flower bud. **I.** Shoot with two alternate leaves (occasionally found in this species) and 3 fruits. **J.** Two views of a seed with remnants of endocarp attached. (A–D from Harley 26964, Bahia, Brazil, ASU0007317; E from Gottsberger 11-27990, Minas Gerais, Brazil, ASU0007315; F from Krapovickas 45798, ASU0007391, San Pedro, Paraguay; G, H, Carnevali 4947, Corrientes, Argentina, ASU0006708; I–J from Souza 10407, São Paulo, Brazil, ASU0007377). See discussion of infraspecific variation in Landrum 2022, pp. 19–23. See map of distribution in Figure 77A. Illustration by Bobbi Angell.

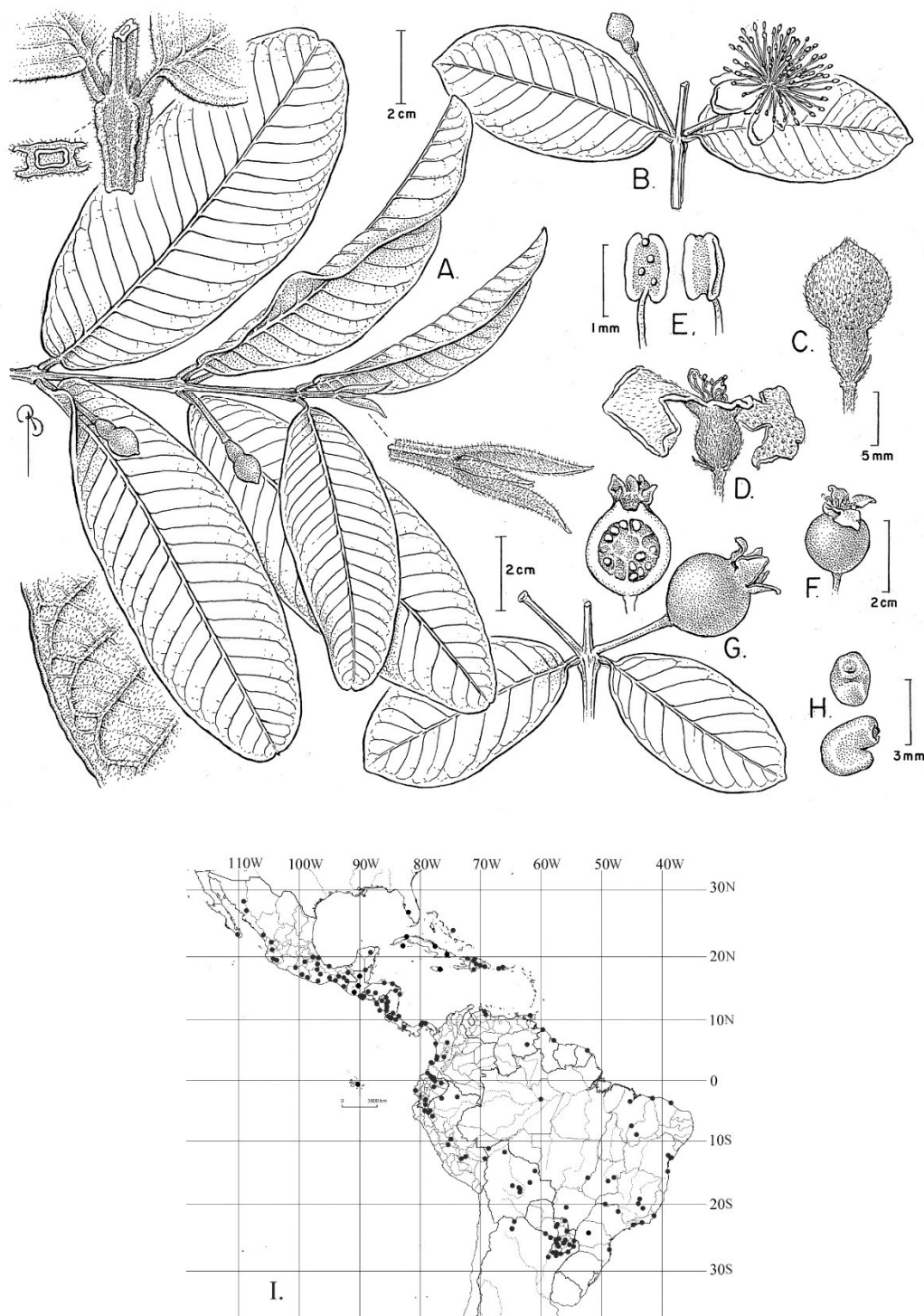


Figure 29. *Psidium guajava*: **A.** Branch with flower buds, including close-ups of node showing wings on twigs (upper left) and growing tip with two decussate pairs of immature leaves (right). **B.** Node with open flower and closed bud. **C.** Closed flower bud with one persistent bracteole. **D.** Flower after anthesis with irregularly torn calyx. **E.** Two views of anther with terminal gland and 3 glands below. **F.** Fruit. **G.** Node with fruit attached and longitudinal-section of fruit showing seeds. **H.** Two views of a seed. **I.** Map of distribution (scale = 1000 km). (A fresh material from cultivated plant, Tempe, Arizona; B & E from *Sanders 8615*, ASU0004830; C, D, & F from *Landrum 6301*, ASU0004836; G, H from *Landrum 6343*, ASU0004869). Illustration by Bobbi Angell.

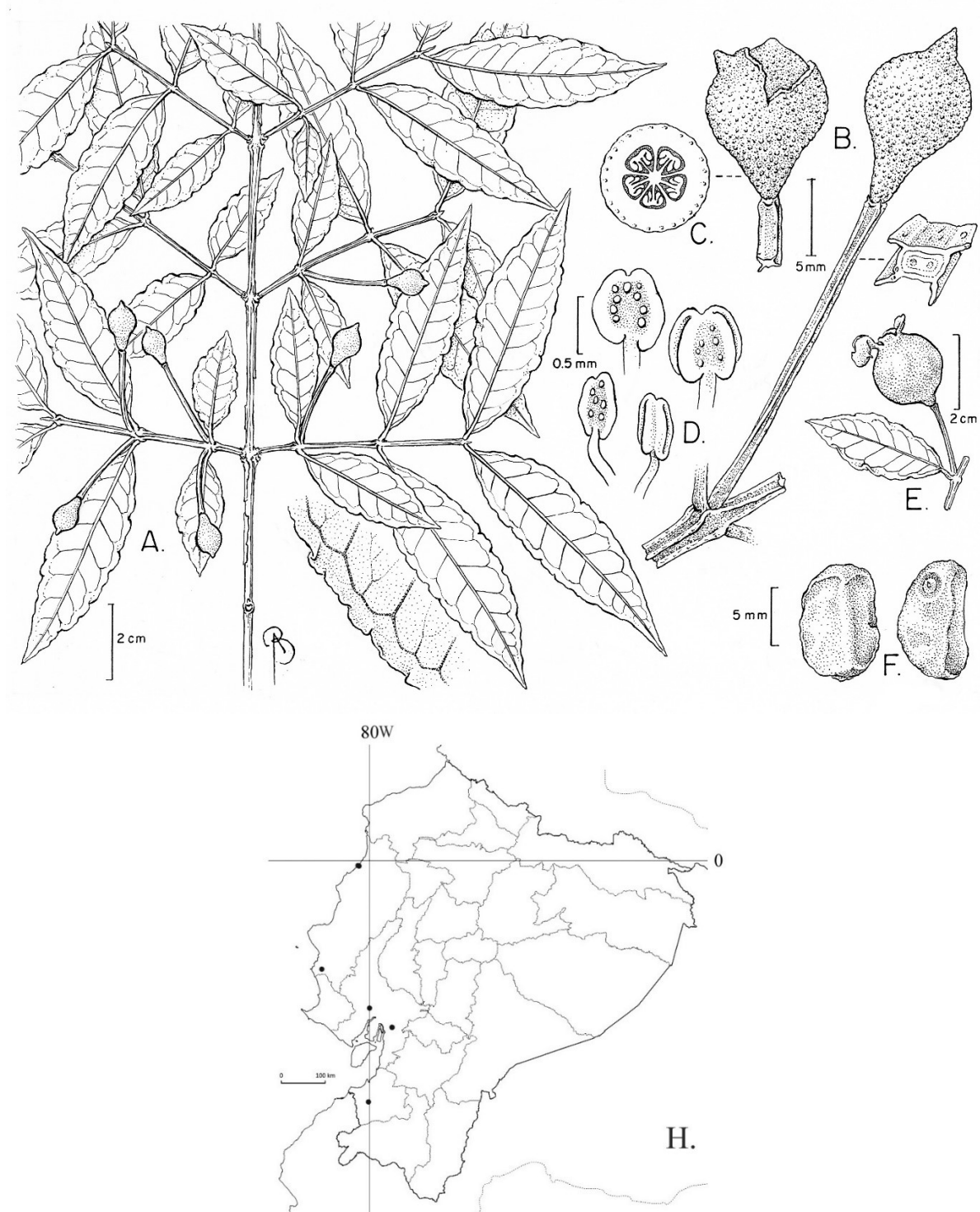


Figure 30. *Psidium guayaquilense*: **A.** Young branch with flower buds. **B.** Flower buds with detail of winged peduncle. **C.** Cross-section of ovary with 5 locules, showing peltate placenta and reflexed ovules. **D.** Anthers showing multiple glands. **E.** Fruit attached to twig. **F.** Seeds with rounded and flat sides. **H.** Map of distribution (scale = 100 km). (A–D drawn from *Cornejo 8690*, ASU0084581, isotype; E drawn from *Rubio et al. 1793*, ASU0005118; F drawn from *Tipaz et al. 867*, ASU0005120). Illustration by Bobbi Angell.

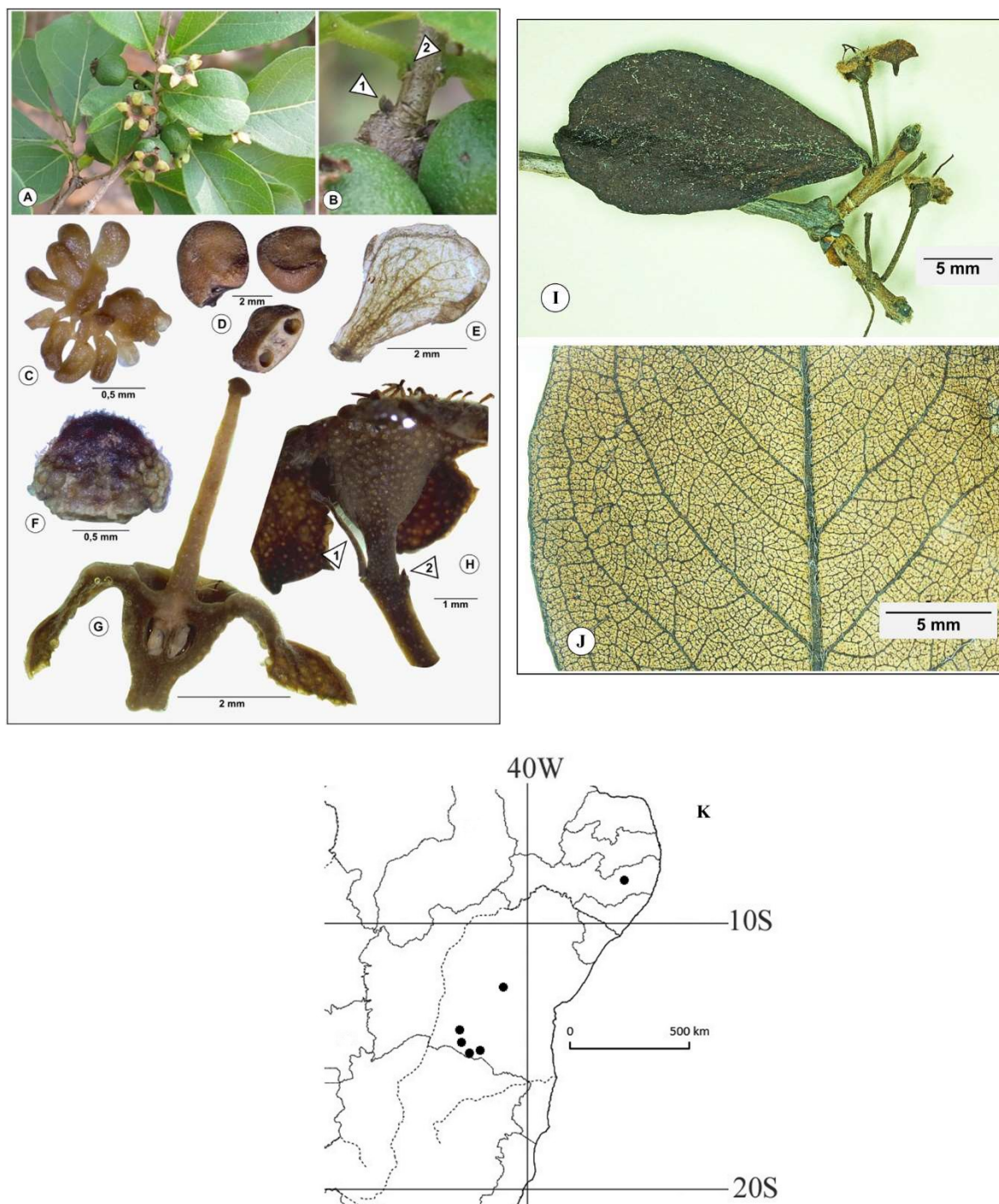


Figure 31. *Psidium guedesiae*: A. Fruiting branch; B. Twig, 1 –Vegetative bud, 2 – Colleter; C. Placenta with ovules; D. Seeds; E. Petal; F. Cataphyll; G. Longitudinal section of an old flower, highlighting gynoeceum features; H. Old flower, 1 – Bracteole linear, 2 – Colleter; I. Twigs and flowers after anthesis, the upper flower with a rostrate calyptra still attached; J. Lower surface of leaf showing venation pattern and scattered appressed hairs; K. Map of distribution. (A, B, D from Stadnik 279, holotype, ALCB; C, E from Guedes 30198, ALCB; F–H from Guedes 30146, ALCB; I & J from Guedes et al. 2922, ALCB). Figure modified from Stadnik and Landrum (2025).

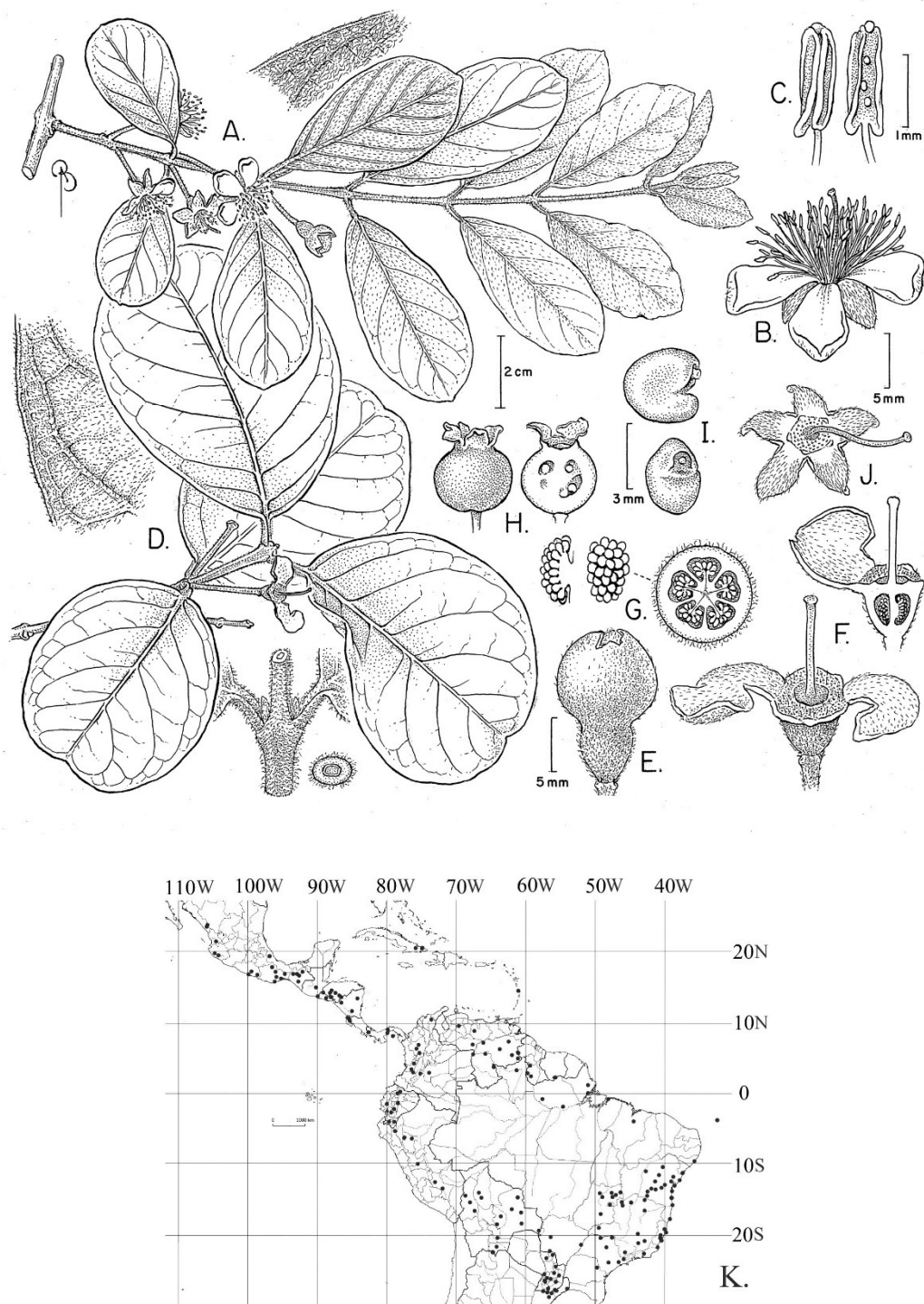


Figure 32. *Psidium guineense*: **A.** Branch with flowers and flower bud; detail of lower leaf surface (non-typical form with appressed hairs on lower leaf surface). **B.** Open flower. **C.** Anthers with glands. **D.** Branch with old flower; detail of lower leaf surface (typical form with erect spreading hairs). **E.** Closed flower bud just beginning to open. **F.** Flowers after anthesis with irregularly opening calyx. **G.** Cross section of ovary showing 5 locules; detail of placentation and ovules. **H.** Fruit and fruit in longitudinal section. **I.** Two views of seed. **J.** Flower after anthesis showing calyx tearing in 5 nearly equal lobes. **K.** Map of distribution (scale = 1000 km). (A & B from *Landrum* 8804, ASU0008042); C from *Landrum* 5676, ASU0004988; D–I from fresh material grown from seeds from Chiapas, Mexico; J from *Nee* 39697, ASU0007532). Illustration by Bobbi Angell.

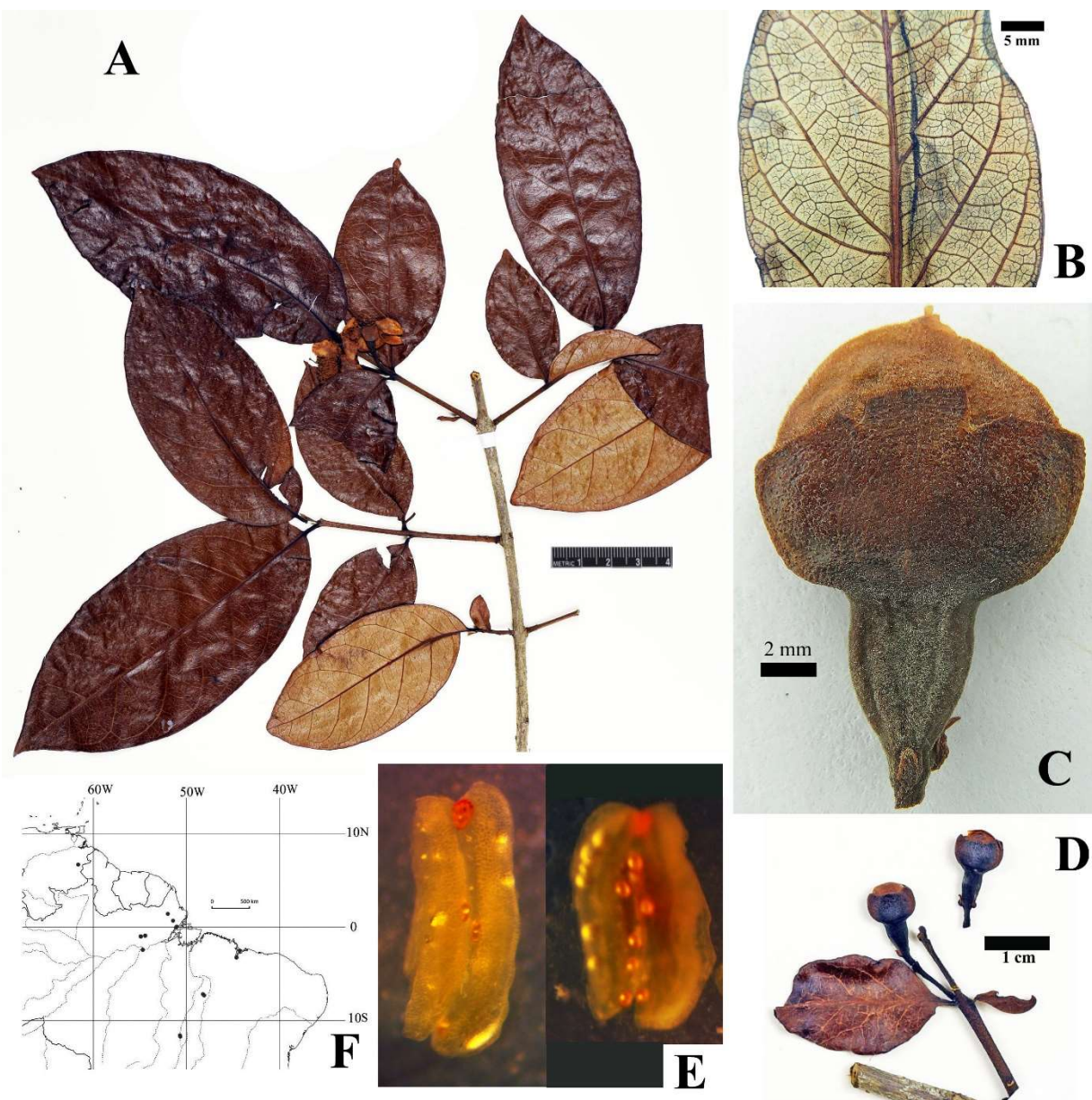


Figure 33. *Psidium guyanense*: **A.** Young branch with leaves and flowers. **B.** Lower surface of leaf showing venation with a mixture of ladder-like veins and reticulate veins. **C.** Flower bud with large terminal pore with sinuate margin and indumentum of minute hairs. **D.** Two typical flower buds and small leaf. **E.** Two anthers from same flower, the left with a terminal gland and 3 smaller glands below, the right with a terminal gland and 8 smaller glands below. **F.** Map of distribution (scale = 500 km). (A, C, D, & E from *Mori 17404*, ASU0010485; B from *Irwin 21204*, NY).

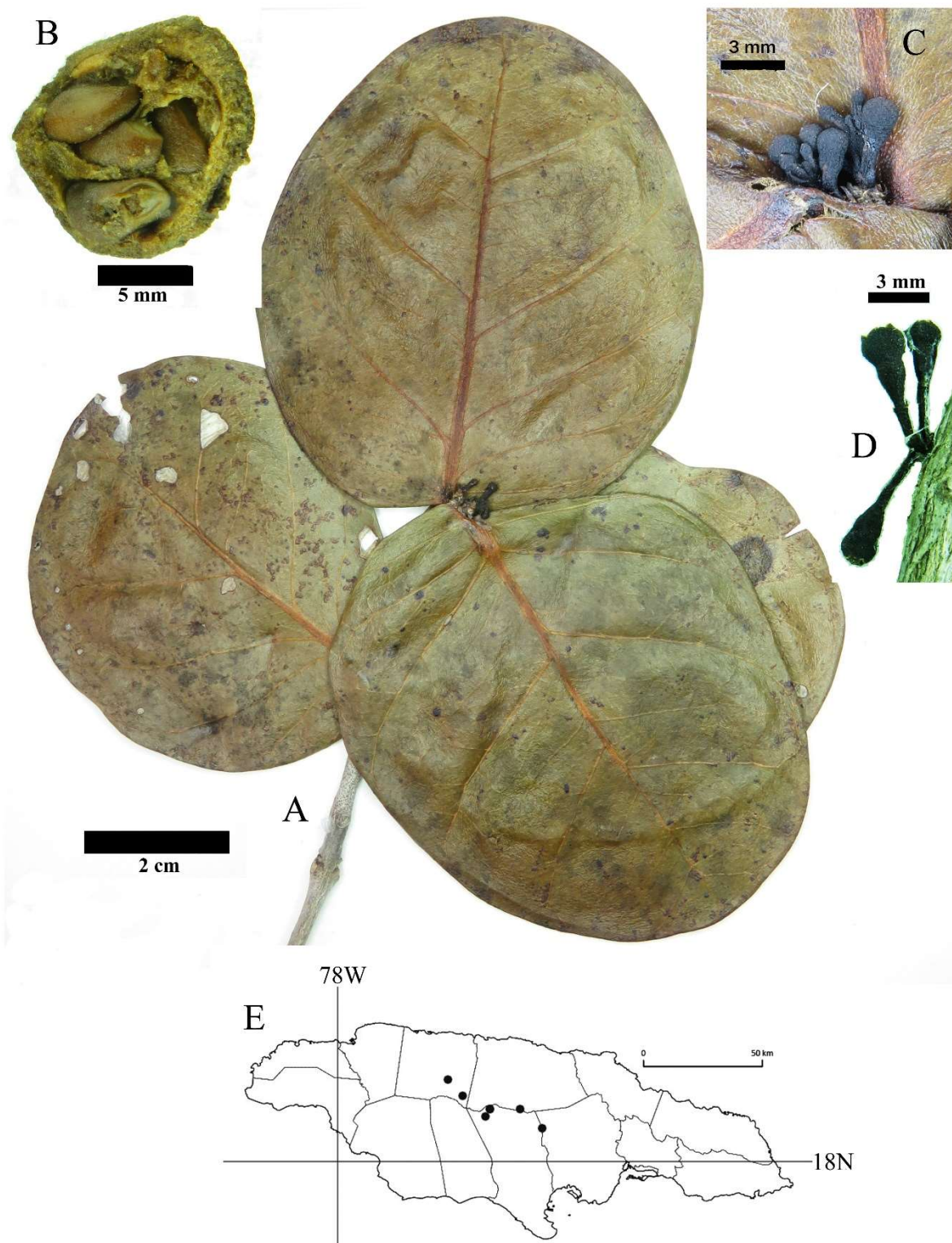


Figure 34. *Psidium harrisianum*: **A.** Branch with leaves and flower buds. **B.** Open fruit showing seeds. **C.** flower buds in cluster near shoot apex. **D.** Flower buds at leafless node. **E.** Map of distribution (scale = 50 km). (A & C from *Franck et al.* 3796, USF; B from *Proctor* 37325, MO; D from *Proctor* 24902, NY).

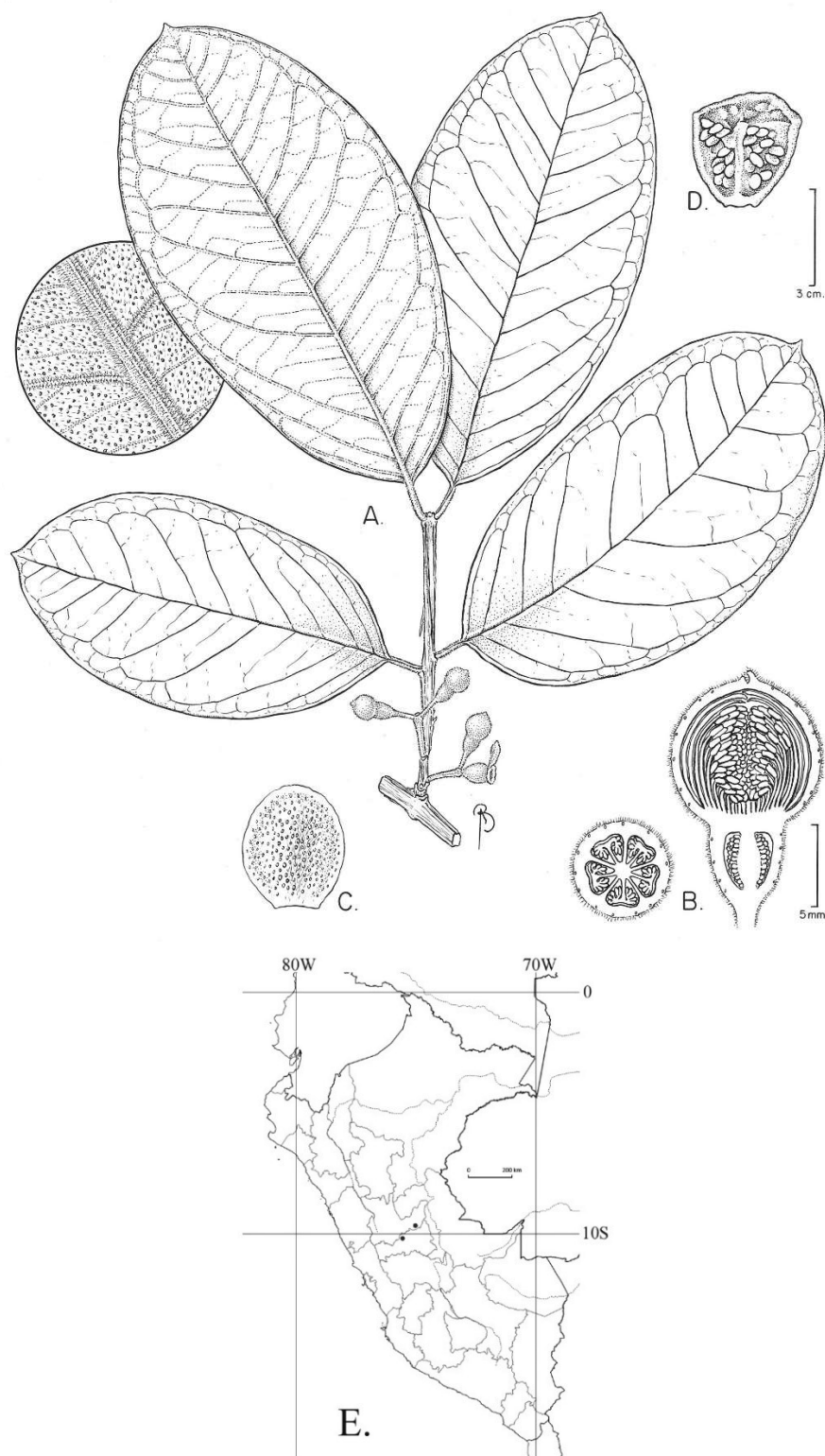


Figure 35. *Psidium huanucoense*: **A.** Branchlet with flower buds and old flower with magnified portion of lower leaf surface. **B.** Longitudinal section of a flower bud and cross section of a floral ovary. **C.** Detached petal. **D.** Portion of a fruit. **E.** Map of distribution (scale = 200 km). (A–C from Tello 47, USM; D from Kröll Saldaño 684, ASU0008056). Illustration by Bobbi Angell.

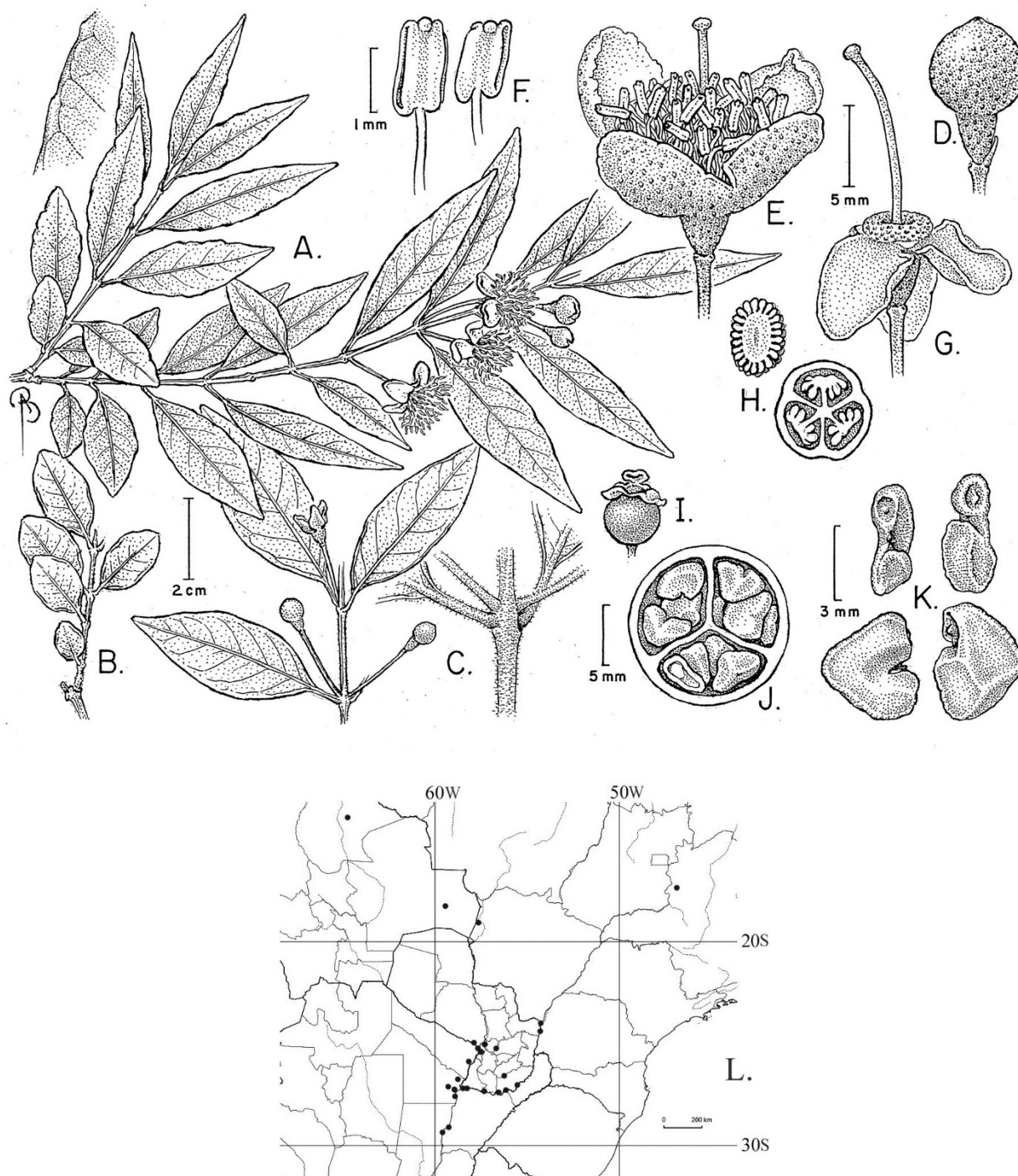


Figure 36. *Psidium kennedyanum*: **A.** Branch with buds and flowers, typical morphology (from Villa Hayes, Presidente Hayes, Paraguay). **B.** Morphology with small elliptic leaves (from Yacuma, Beni, Bolivia). **C.** Portion of twig with flower buds and opening flower; detail of node and peduncles. **D.** Closed flower bud. **E.** Opening flower. **F.** Anthers with one terminal gland. **G.** Flower after anthesis. **H.** Ovary in cross-section and extracted placenta with ovules. **I.** Fruit with persistent calyx. **J.** Cross-section of fruit showing angular seeds. **K.** Views of angular seeds. **L.** Map of distribution (scale = 200 km). (A, D, & F–I from *Landrum* 8879, ASU0008073; B from *Foster* 13368, ASU0015615; C & E from *Hatschbach* 52495, ASU0008064; J & K from *Zardini* 25759, ASU0008070). Illustration by Bobbi Angell.

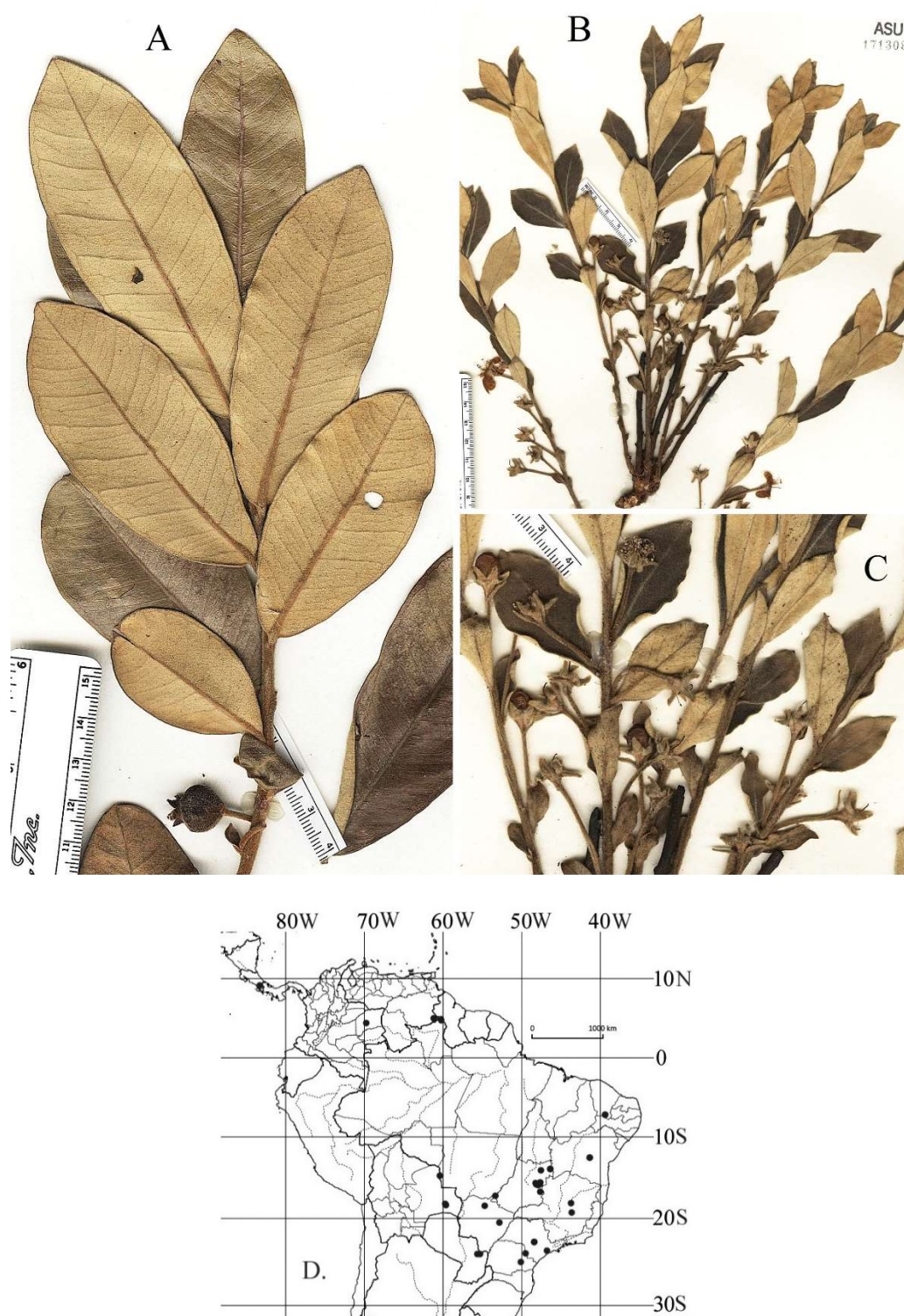


Figure 37. *Psidium laruotteanum*: **A.** Young branch of 0.7 m shrub; note large leaves. **B.** Portion of an herbarium specimen showing full stature of plant with new growth arising from ground level stem. **C.** Close view of flowers. **D.** Map of distribution (scale = 1000 km). (A from Ribas & Pereira 1812, ASU0008094; B, C from Hatschbach 53638,

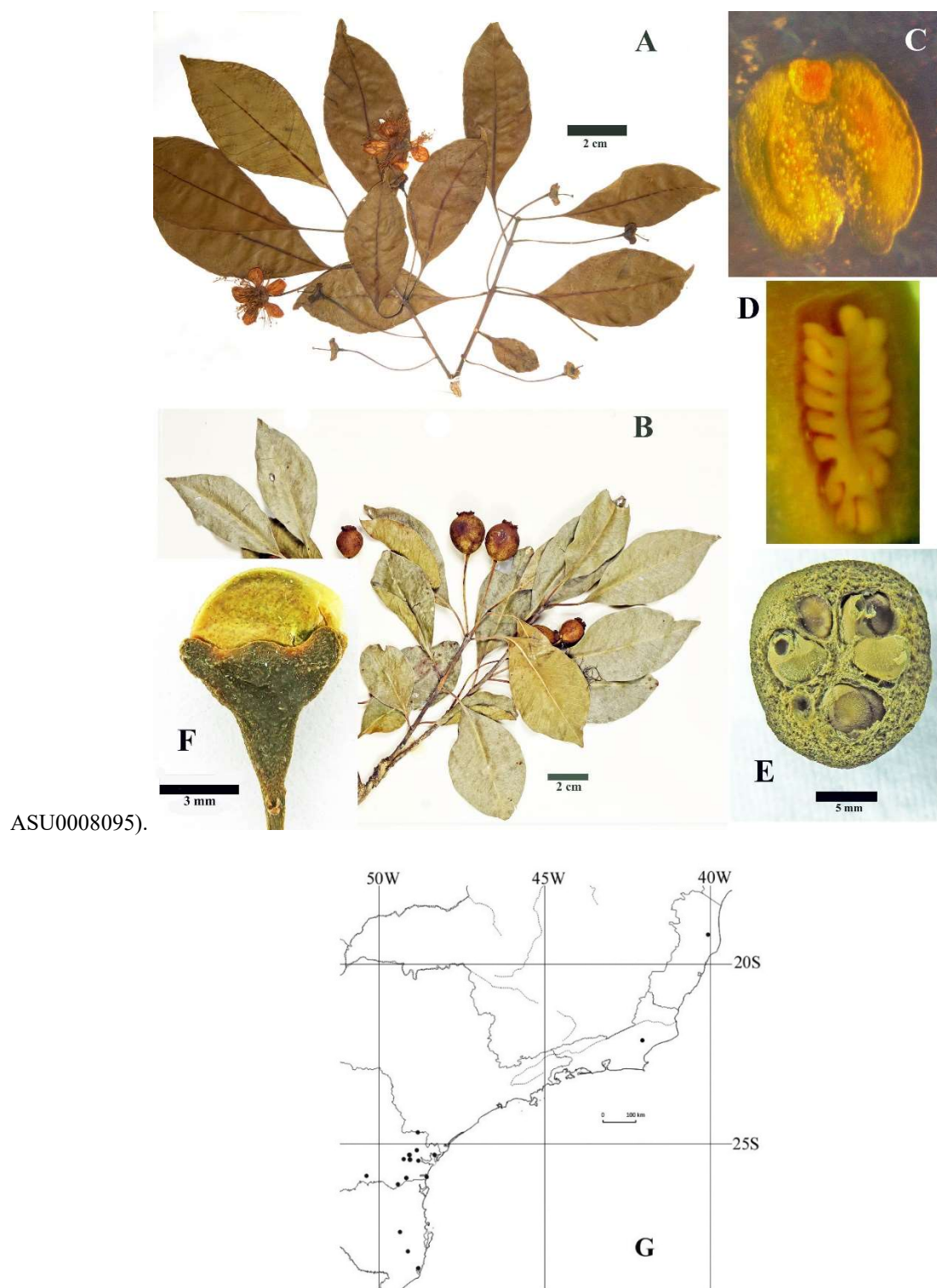


Figure 38. *Psidium longipetiolatum*: **A.** Twigs with leaves, and flowers. **B.** Twigs with leaves and fruits. **C.** Anther with terminal gland. **D.** Placenta with ovules. **E.** Cross section of young fruit and seeds. **F.** Side view of flower bud showing sinuate margin of calyx. **G.** Map of distribution (scale = 100 km). (A from *Hatschbach 15829*, NY; B from *Silva & Hatschbach 846*, ASU0008117; C, D, & F from *Koczik 318*, ASU0008113; E from *Hatschbach 18624*, ASU0008118).

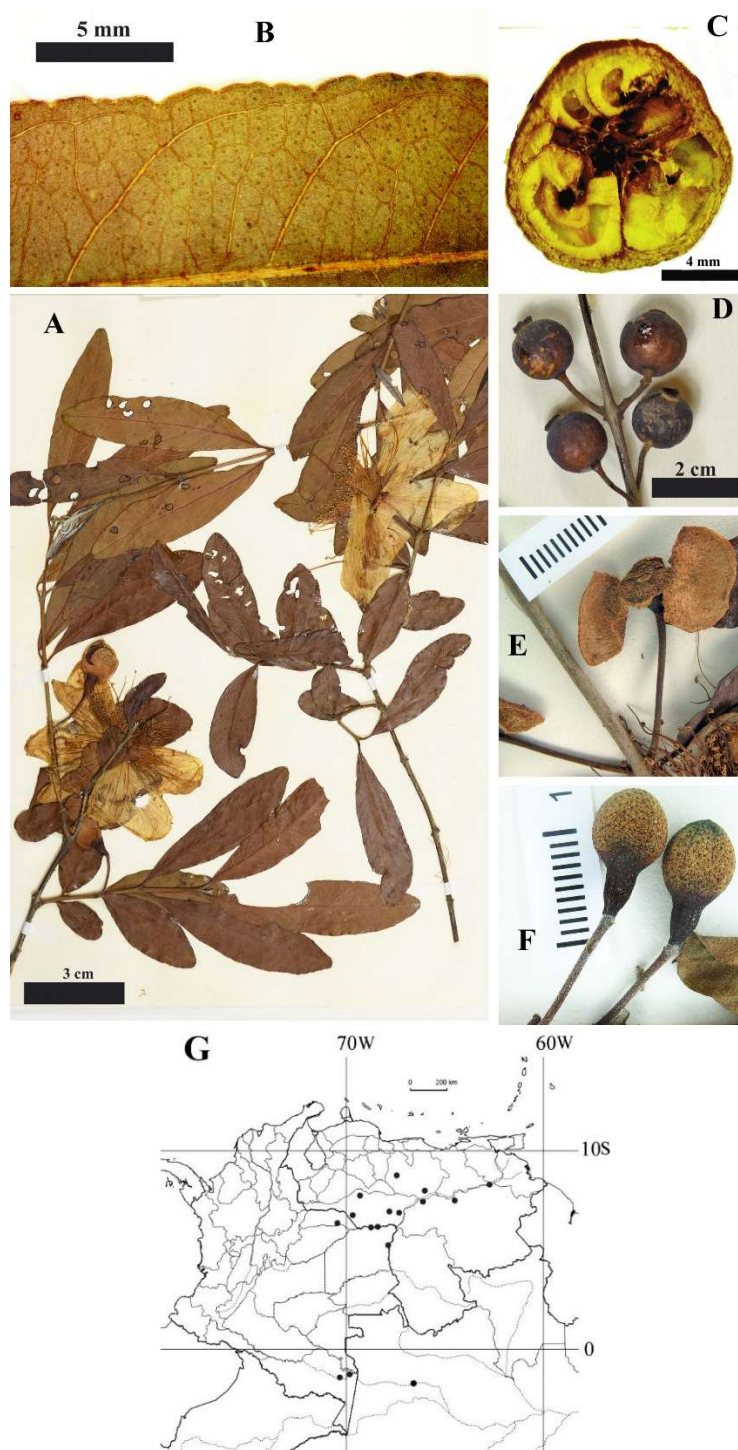


Figure 39. *Psidium maribense*: **A.** Herbarium sheet showing narrowly elliptic to oblanceolate leaves and large flowers. **B.** Leaf close-up showing irregularly crenate margin. **C.** Cross-section of young fruit and immature seeds. **D.** Four fruits at leafless nodes. **E.** Flower after anthesis with persistent calyx. **F.** Closed flower buds. **G.** Map of distribution (scale = 200 km). (A from Wurdack & Monachino 39879, MICH; B from Diaz 5170, ASU0018985; C from Zarucchi & Barbosa 3402, ASU0007590; D from Davidese & Gonzales 12771, MO; E from Rosales & Valles 65, MO; F from Holt & Gehriger 209, MICH).

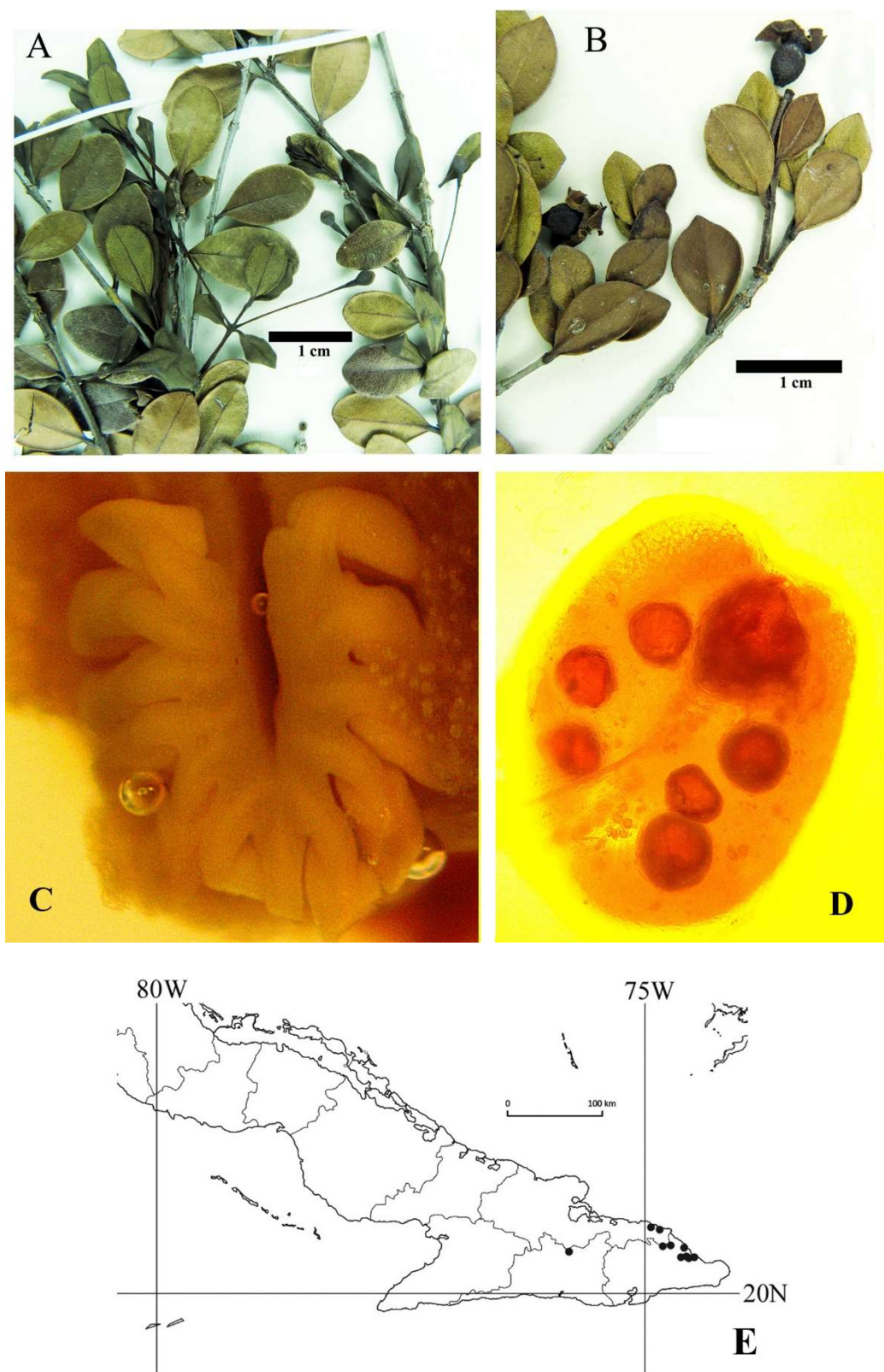


Figure 40. *Psidium minutifolium*: **A.** Twigs, leaves, and flower buds. **B.** Twigs, leaves, and young fruits. **C.** Placenta with ovules, the lowermost cut off. **D.** Anther with terminal gland and 6 smaller glands below. **E.** Map of distribution (scale = 100 km). (A from Álvarez de Zayas et al. 42690, JE; B from Wright 2464, MO; C & D from Bisse 17121, JE).

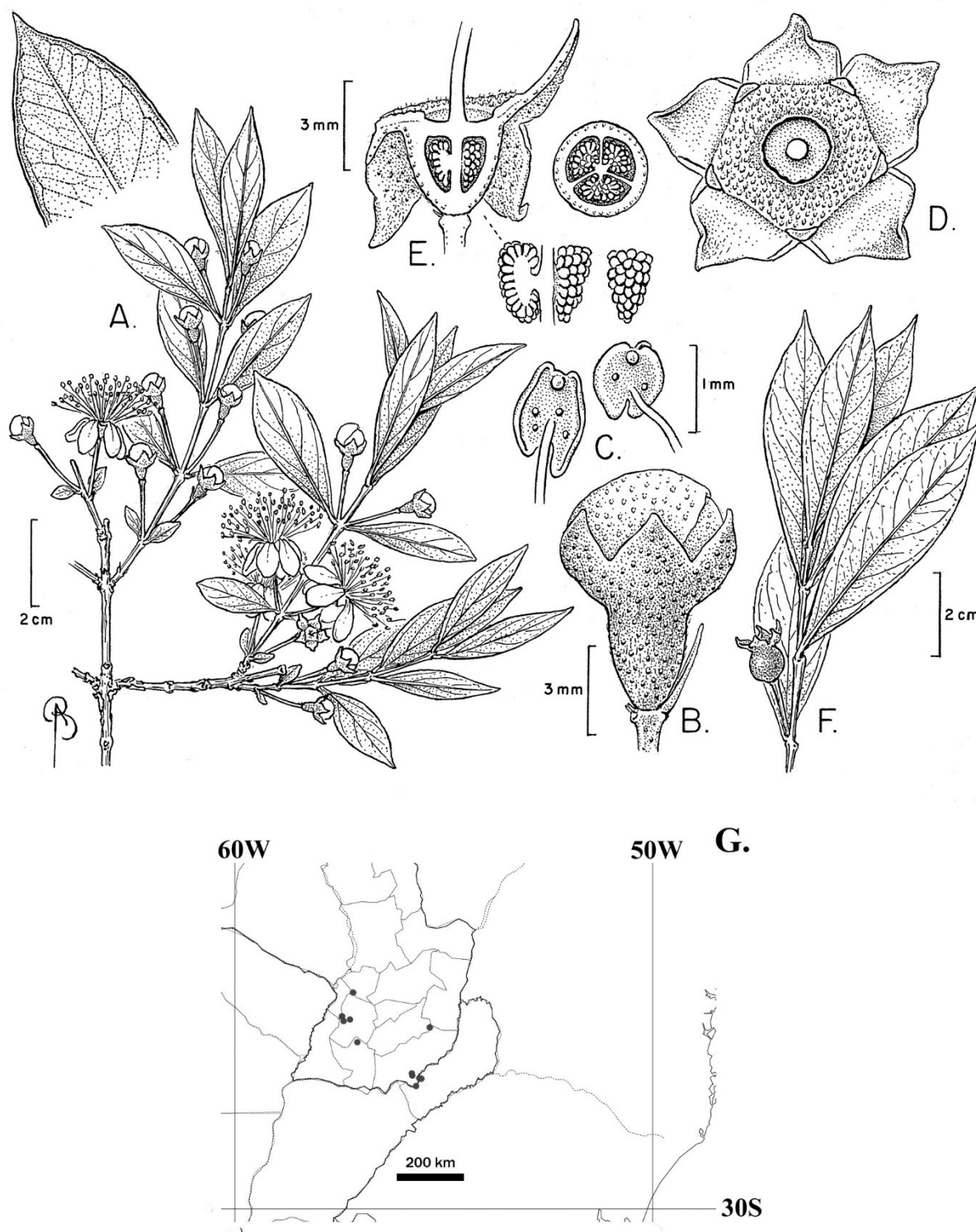


Figure 41. *Psidium missionum*: **A.** Branch with flowers and buds at various stages plus detail of venation in distal portion of leaf. **B.** Closed flower bud. **C.** Anthers with terminal gland and additional glands below. **D.** View of flower apex after anthesis with small tears between calyx lobes. **E.** Sections of ovary and extracted placenta with ovules. **F.** Branchlet with leaves and fruit. **G.** Map of distribution (scale = 200 km). (A–C from Keller 7576, ASU0066964; D & E from Krapovickas 44607, ASU0008130; F from Landrum 5718, ASU0008126). Illustration by Bobbi Angell.

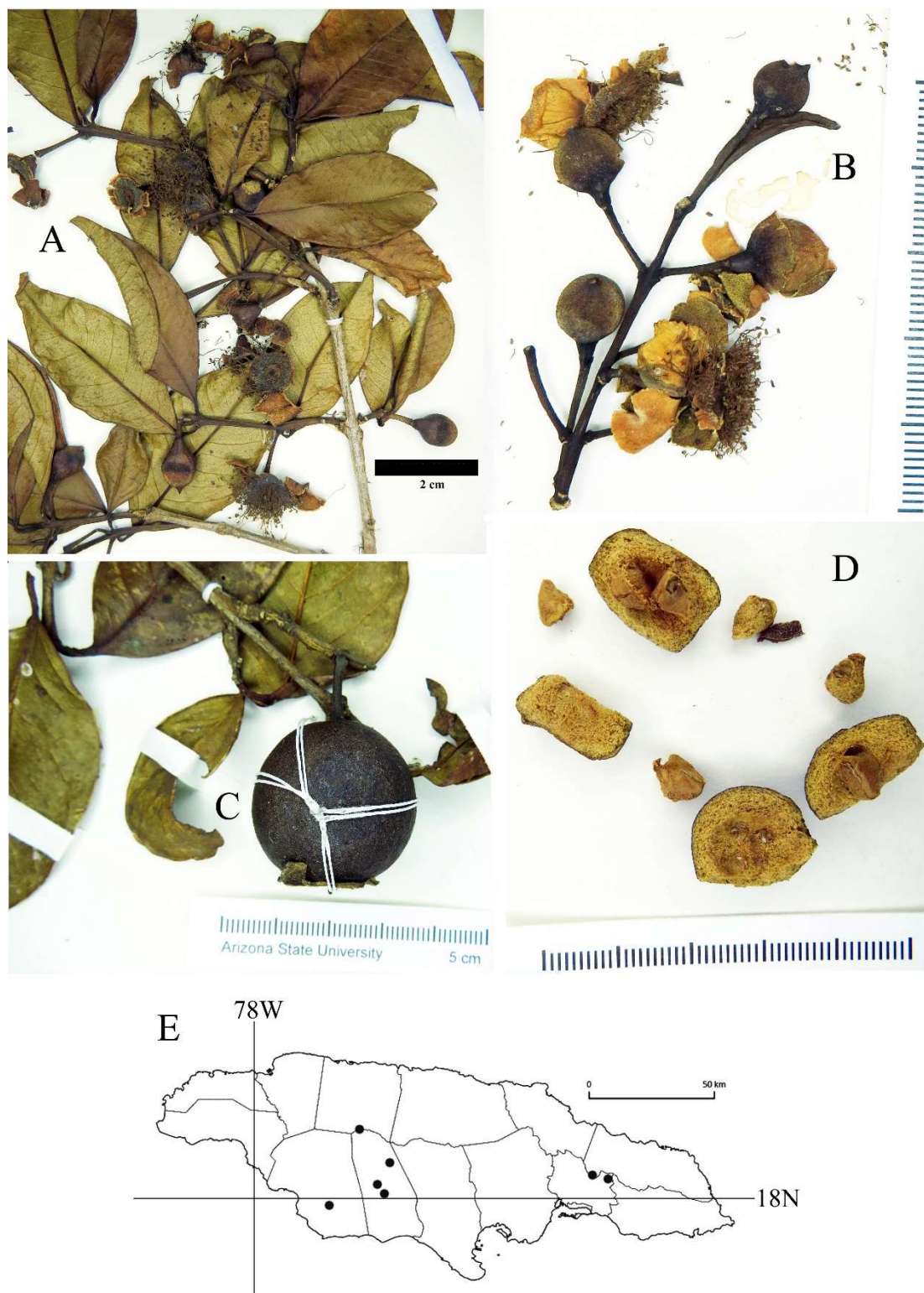


Figure 42. *Psidium montanum*: **A.** Twigs, leaves, flowers, flower buds. **B.** Inflorescence with buds and flowers. **C.** Fruit on twig with leaves. **D.** Parts of open fruit and seeds. **E.** Map of distribution (scale = 50 km). (A from *Proctor* 26438, MICH; B from *Harris* 8769, NY; C from *Proctor* 24762, MICH; D from *Proctor* 24762, MICH).

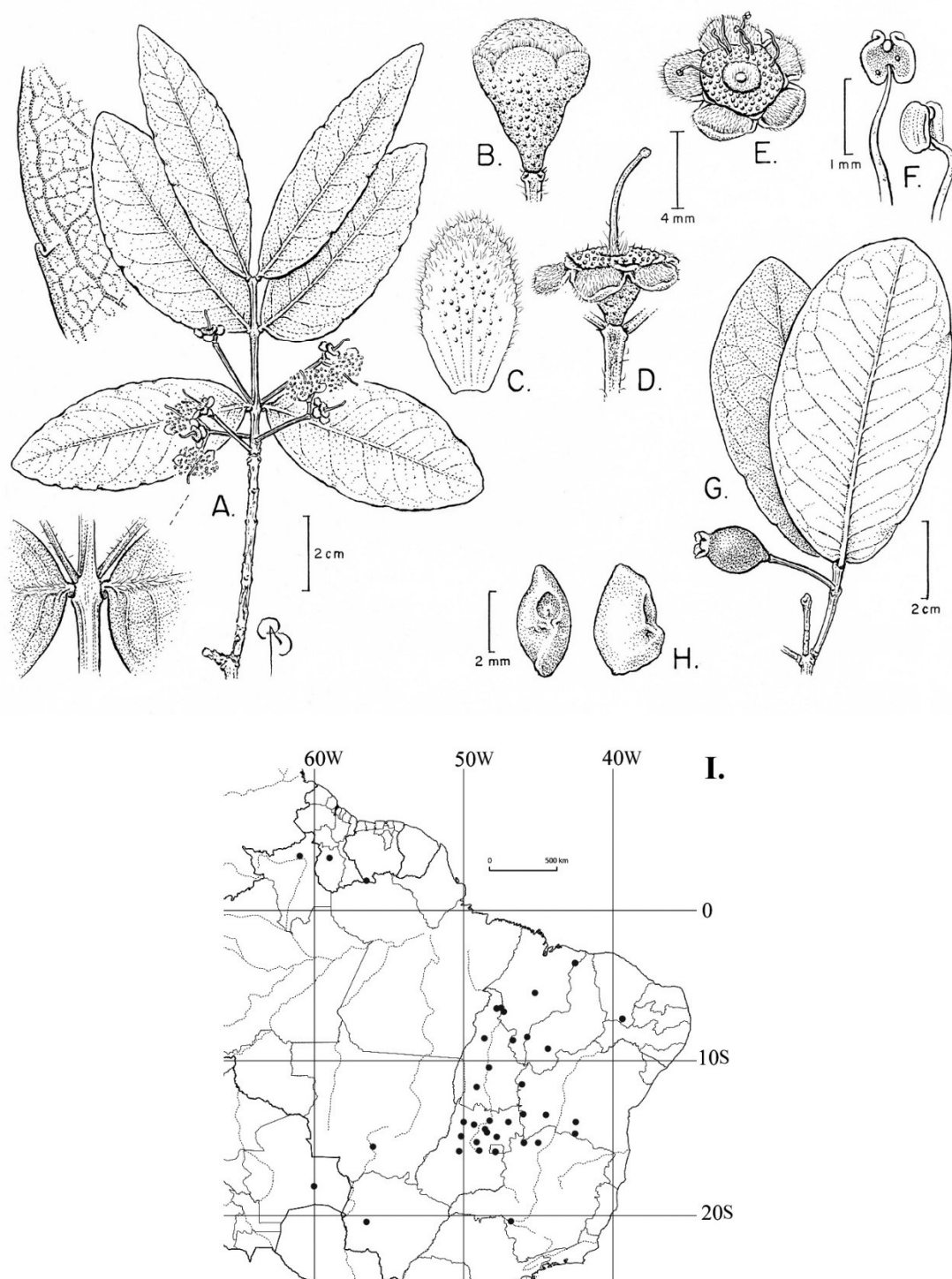


Figure 43. *Psidium myrsinites*: **A.** Branch with 3-flowered and uniflorous peduncles; detail of node and venation pattern. **B.** Flower bud. **C.** Petal. **D.** Central flower of a dichasium after anthesis. **E.** Apex of flower after anthesis showing short tears between the calyx lobes not penetrating the staminal ring. **F.** Anther with terminal gland and 2 smaller glands below. **G.** Twig with leaves and fruit. **H.** Two views of seed. **I.** Map of distribution (scale = 500 km). (A–D & F *Alvarenga* 876, ASU0007595; E from *Stadnik* 101, ASU0075035-photos; G & H from *Azevedo et al.* 1098, ASU0008147). Illustration by Bobbi Angell.

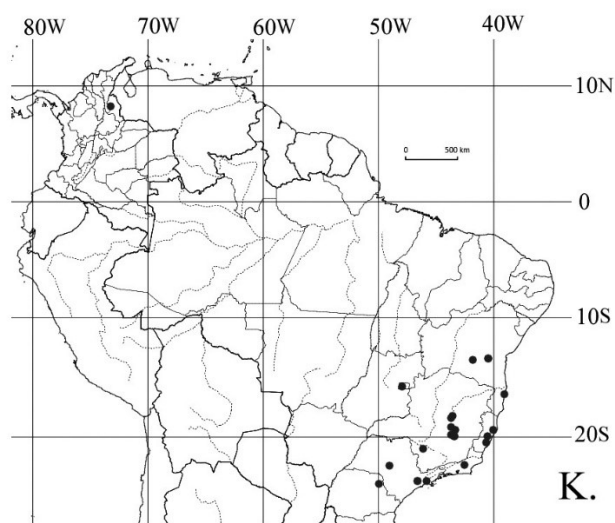
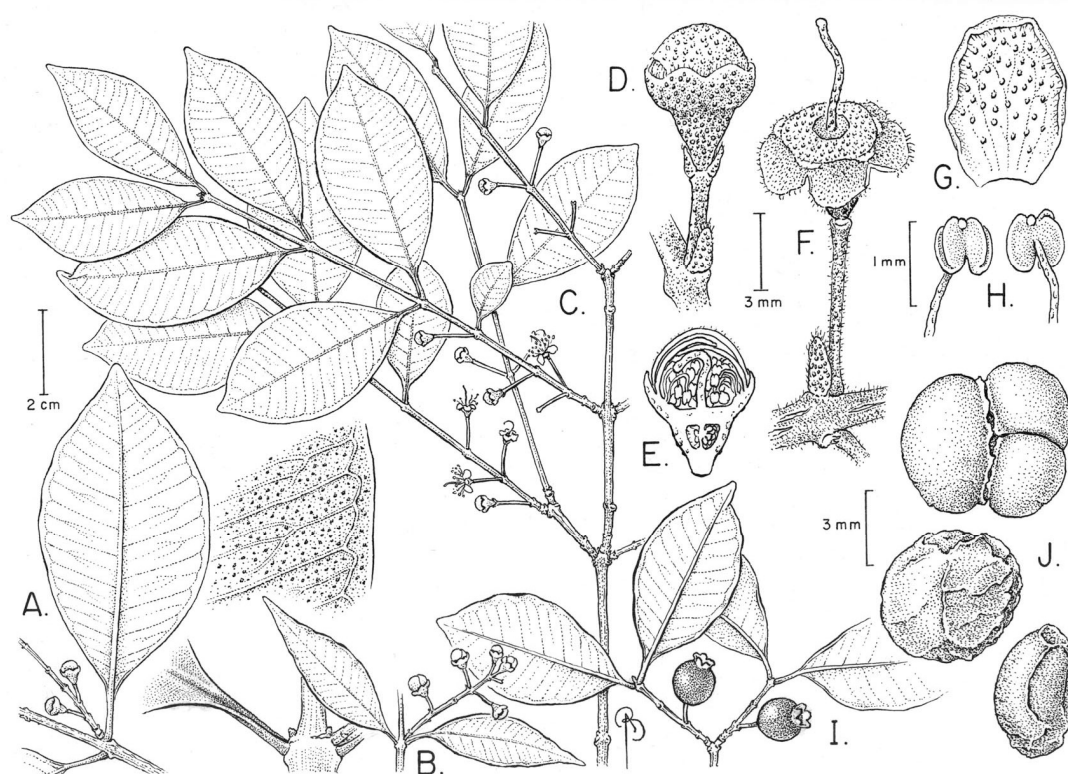


Figure 44. *Psidium myrtilloides*: **A.** Portion of flowering twig showing one leaf with close-up of venation pattern. **B.** Portion of flowering twig showing bracteate shoot with five flowers persisting. **C.** Branch with flowers and buds at proximal nodes. **D.** Flower bud in axil of bract. **E.** Longitudinal section of flower bud. **F.** Flower after anthesis showing tears between calyx lobes that do not penetrate the staminal ring. **G.** Petal with numerous glands. **H.** Anther with a single terminal gland. **I.** Twig with fruits. **J.** Cluster of three seeds as they are found in a fruit, with rounded sides towards fruit wall and flat sides abutting adjacent seeds; two single seeds with persistent endocarp tissue. **K.** Map of distribution (scale = 500 km). (A from *Hatschbach* 51897, ASU0009507; B from *Kawasaki* 863, ASU0009498; C & E–H from *Hatschbach et al.* 71498, ASU0009504; D from *Kawasaki* 874, ASU0009501; I from *Folli* 1829, ASU0052022; J from *Pereira s.n.*, ASU0009495). Illustration by Bobbi Angell.

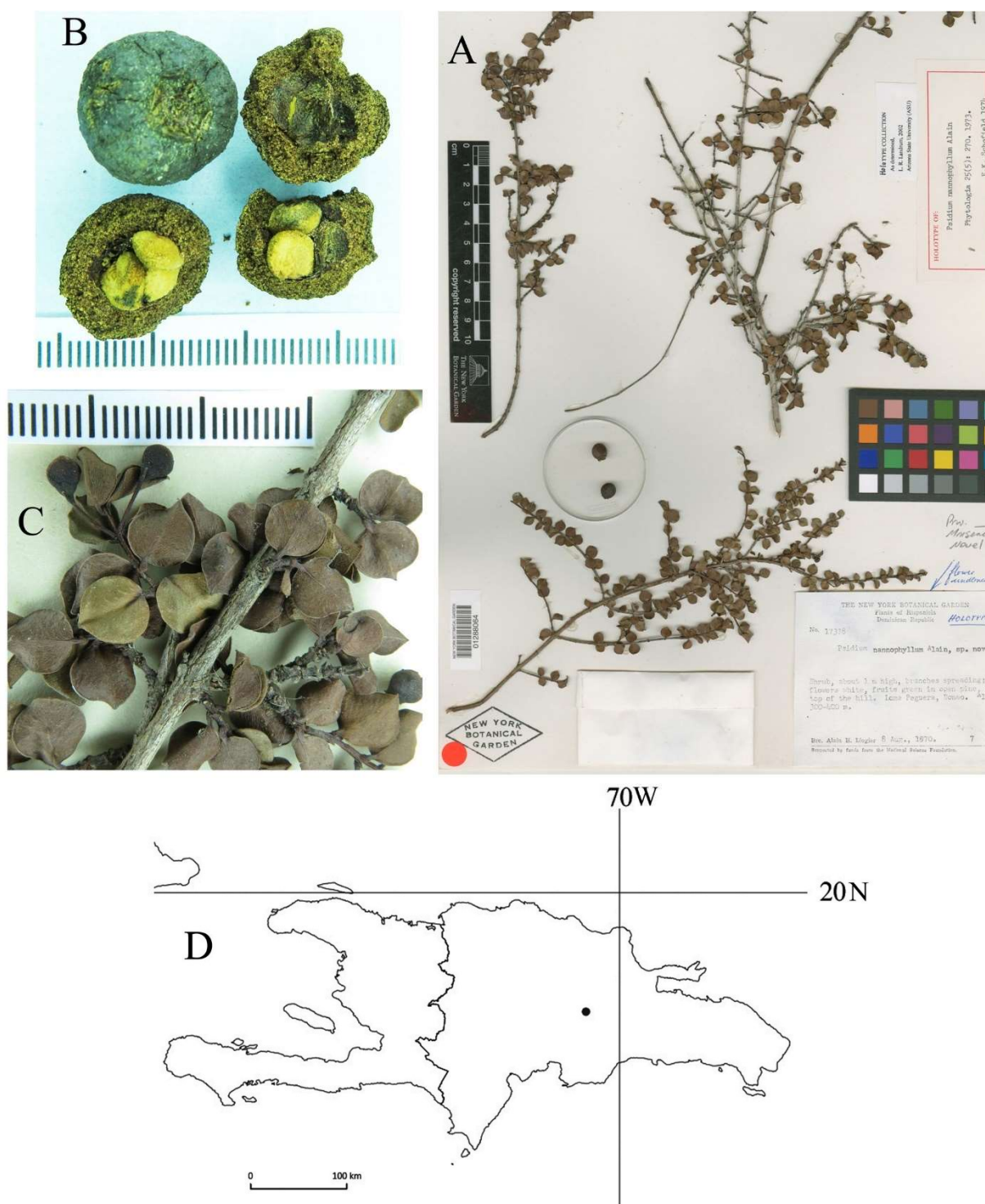


Figure 45. *Psidium nannophyllum*: A. Holotype sheet, NY. B. Closed and open fruit showing seeds. C. Close up of twigs, leaves, and flower buds. D. Map of distribution (scale = 100 km). (A from Liogier 17378, holotype, NY; B from Liogier 17378, US; C from Zanolini 12917, JBSD).

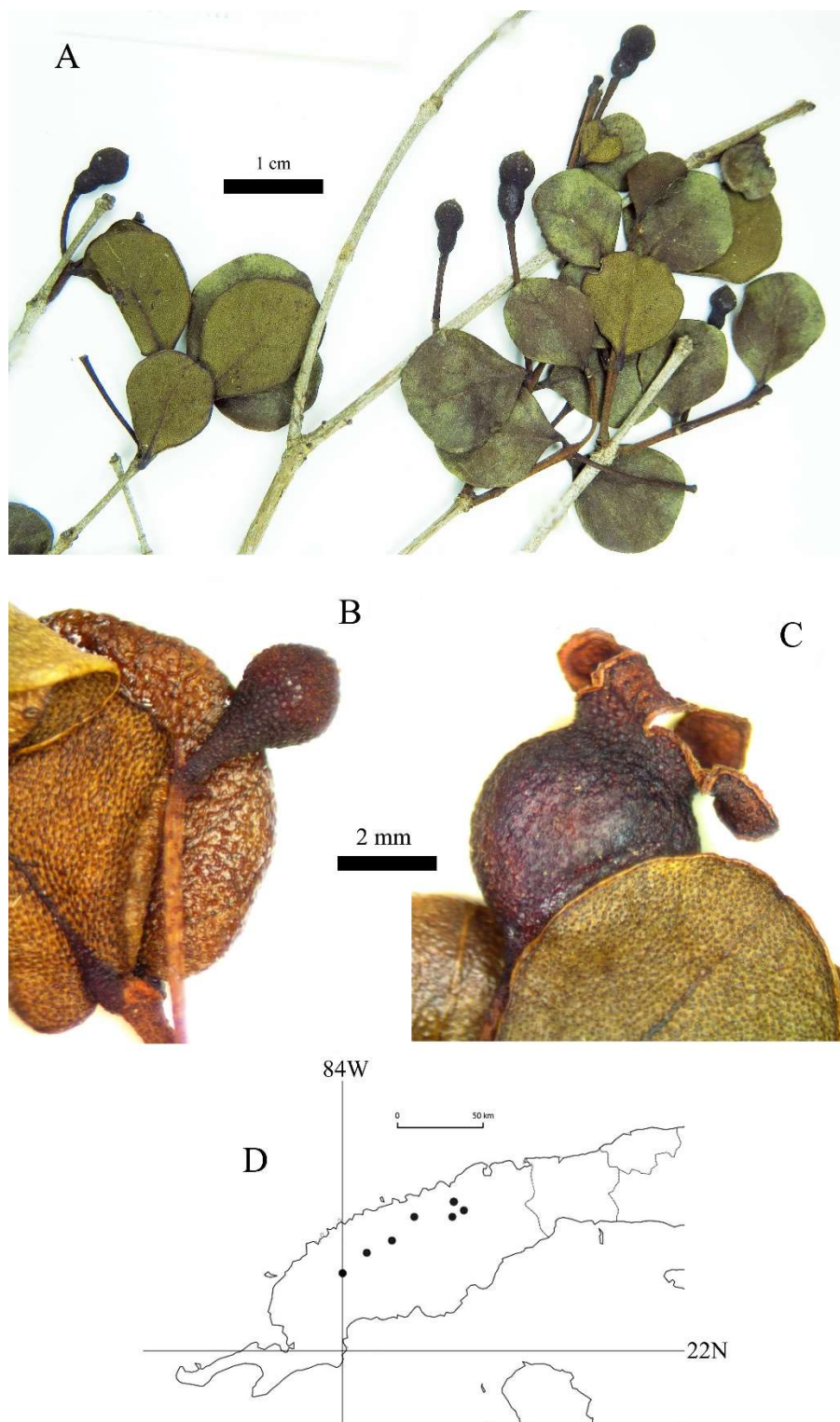


Figure 46. *Psidium nummularia*: **A.** Twigs, leaves and unopened flower buds. **B.** Unopened flower bud. **C.** Young fruit. **D.** Map of distribution in western Cuba (scale = 50 km). (A from *Luis et al* 4571, ASU0069452; B & C from *Luis et al.* 4693, ASU0355221).

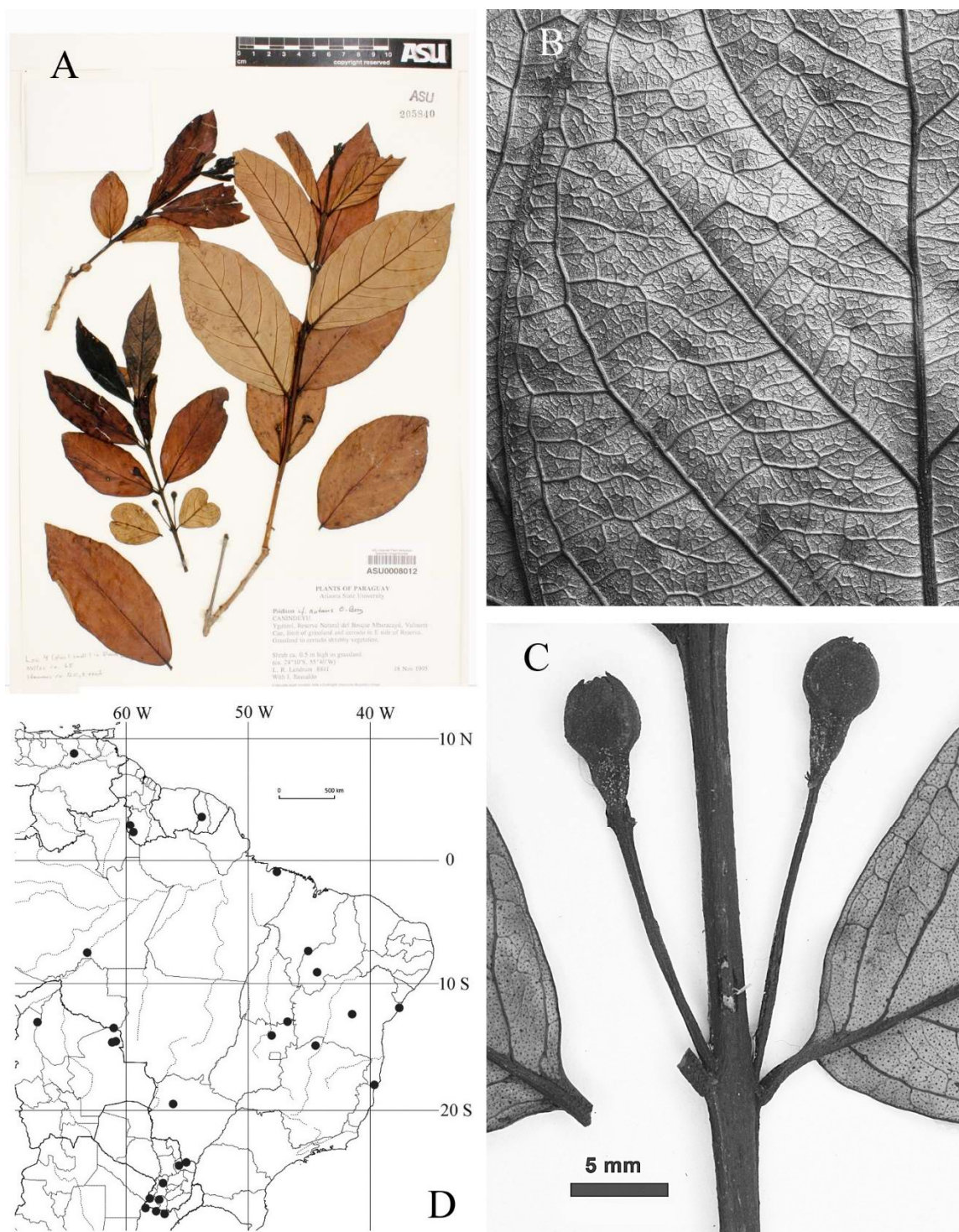


Figure 47. *Psidium nutans*: A. Herbarium sheet from Reserva Natural del Bosque Mbaracayú, Canindeyú, Paraguay. B. Leaf venation. C. Flower buds. D. Map of distribution (scale = 500 km). (A, C from Landrum 8841, ASU0008041; B from Killeen 6974, ASU0008011).

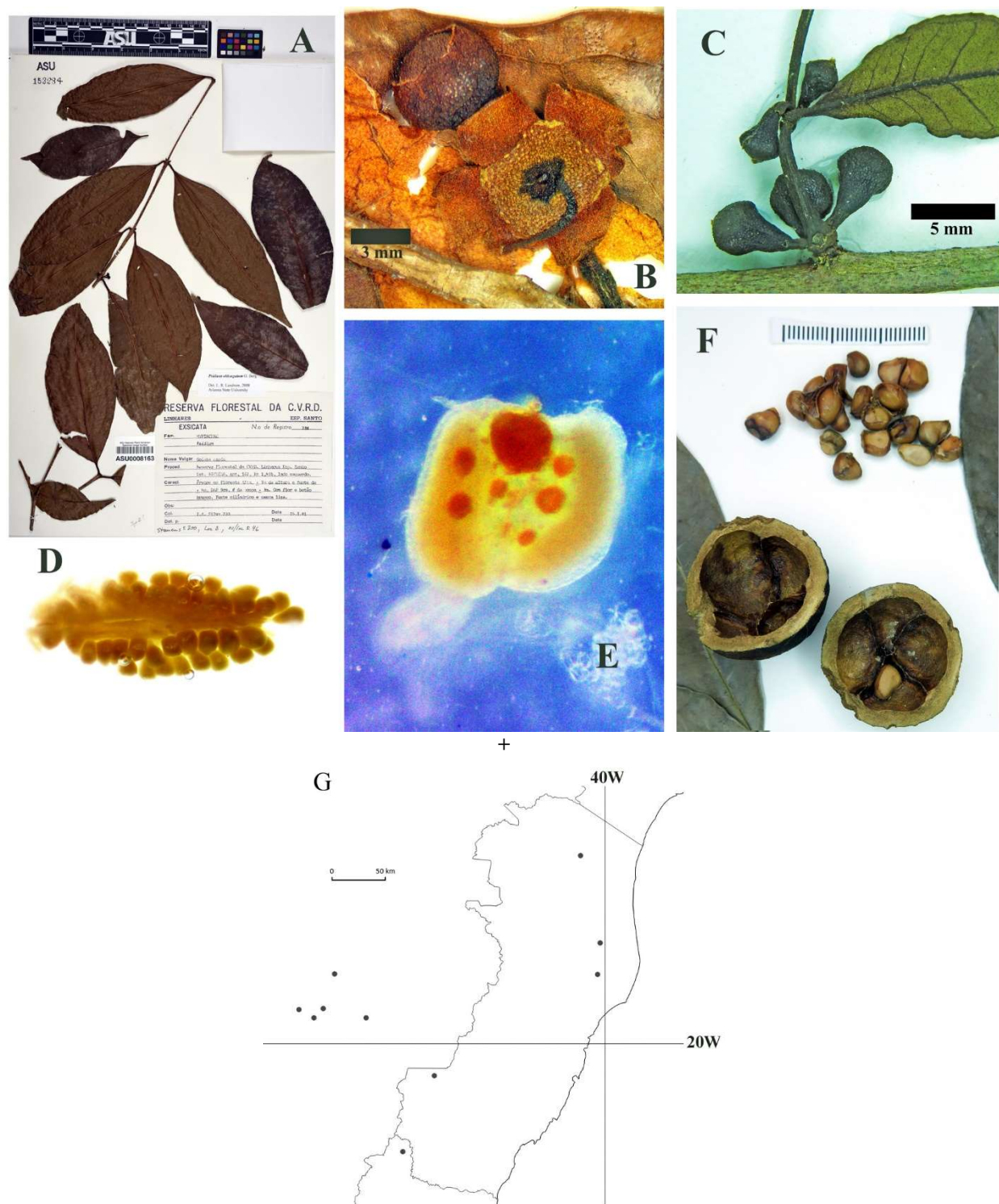


Figure 48. *Psidium oblongatum*. **A.** Sheet showing relatively large, narrow leaves. **B.** View of mature closed flower bud (above) with large terminal pore, and flower after anthesis (below) with tears in calyx cutting through calyx tube but not staminal ring. **C.** Immature flower buds with no visible pore in calyx. **D.** Adaxial view of placenta of one locule with mainly biseriate ovules. **E.** Anther with a terminal gland and 6 smaller glands below. **F.** Opened fruit with most seeds extracted. **G.** Map of Distribution (scale = 50 km). (A, D, E from Silva *et al.* 230, ASU0008163; B from Folli 6505, ASU0053020; C from Andrade 495, ASU0008162; F from Lopes 899, ASU0007599).

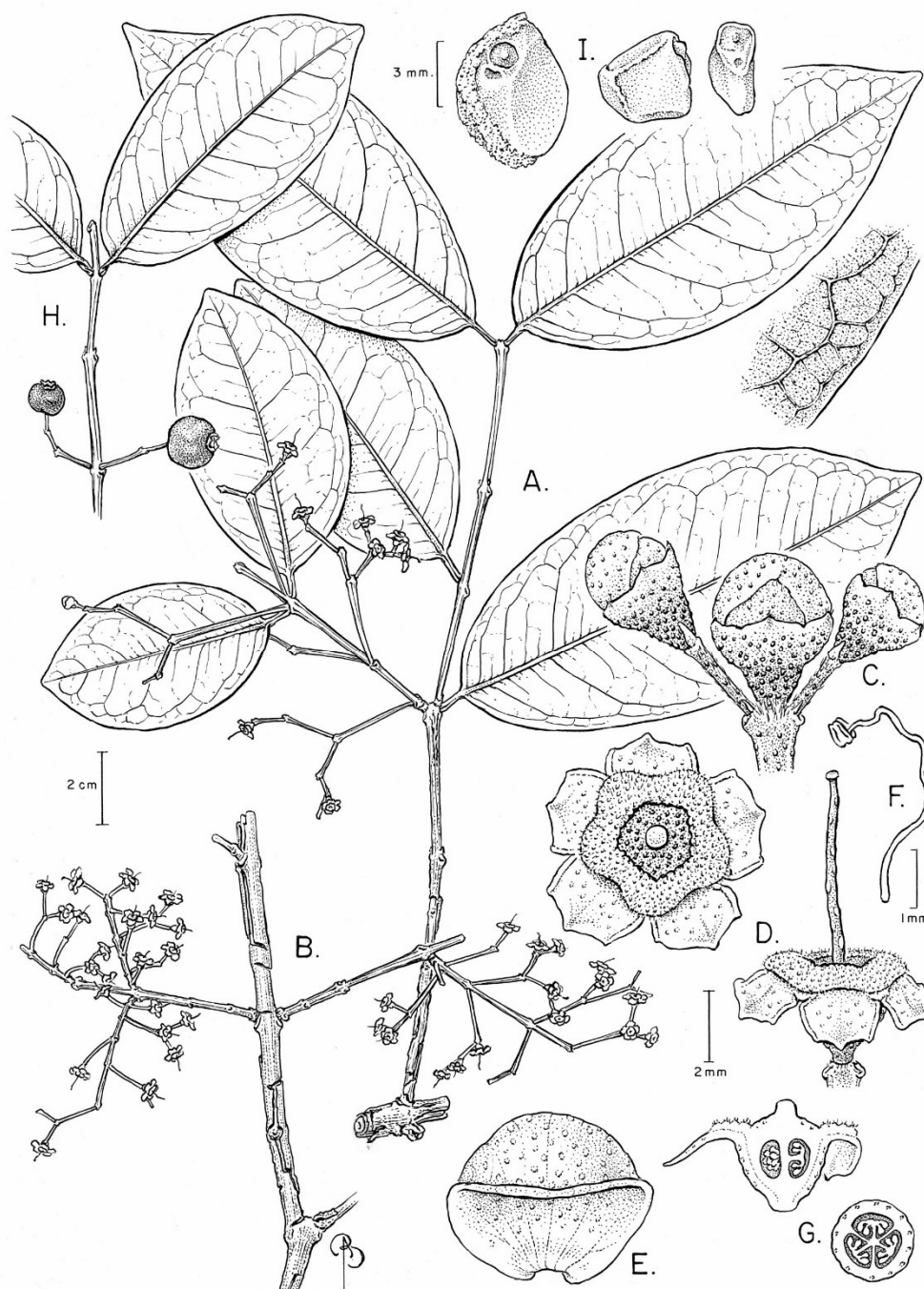


Figure 49. *Psidium occidentale* Landrum & C. Parra-O. **A.** Flowering branch. **B.** Inflorescences after anthesis. **C.** Flower buds on a dichasium. **D.** Flower after anthesis. **E.** Petal. **F.** Stamen. **G.** Longitudinal and transversal section of ovary. **H.** Fruiting branch. **I.** Seeds. (A from Webster 31112, ASU0074786; B, D-G from the isotype Rubio & Quelal 659, ASU0074800; C from Tipaz *et al.* 1275, ASU0074784; H-I from Quelal *et al.* 443, ASU0074782). See map of distribution in Figure 76C. Illustration by Bobbi Angell.

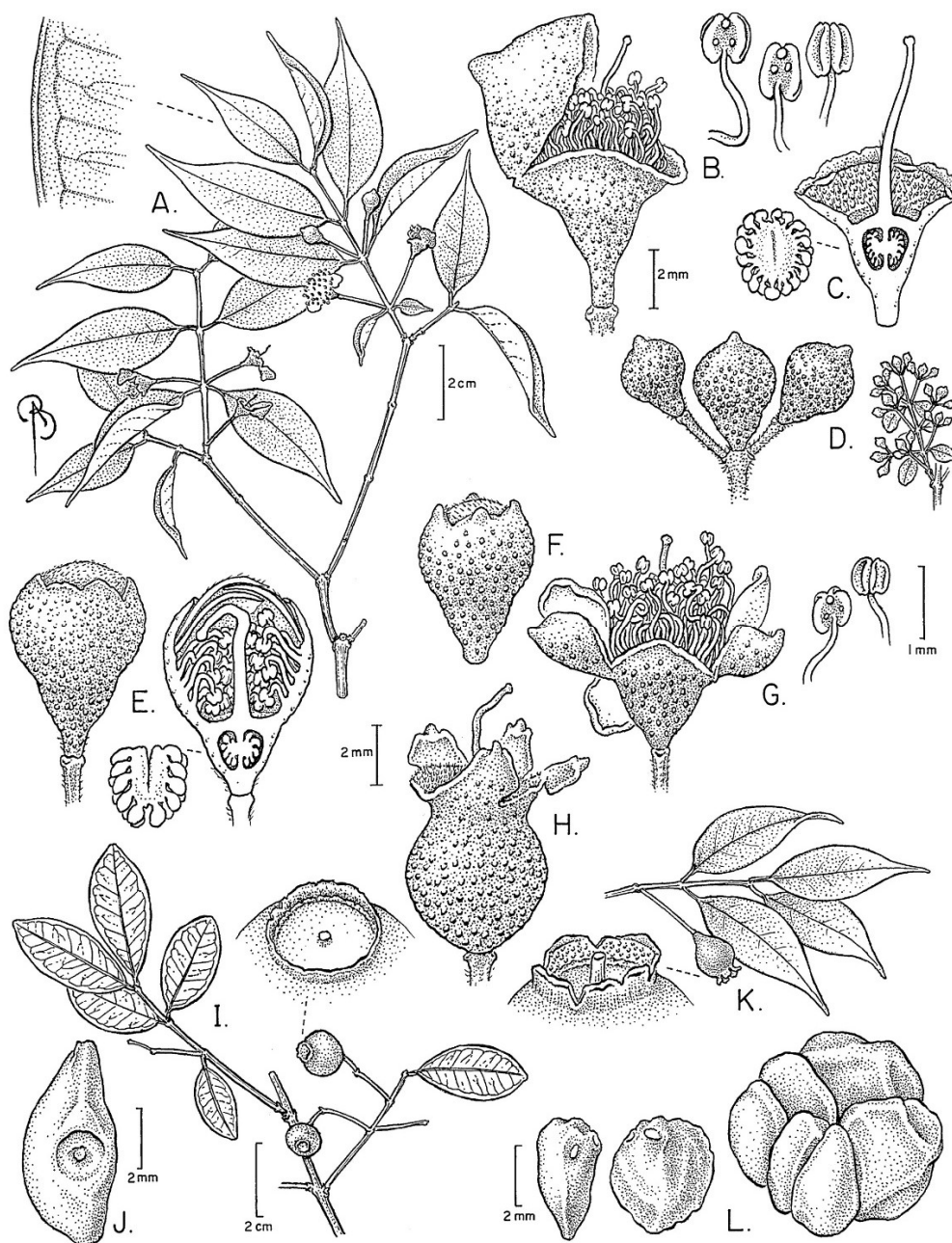


Figure 50. *Psidium oligospermum*: **A.** Flowering branch with detail of venation. **B.** Opening flower with calyptra; anthers with terminal gland and two smaller glands below. **C.** Longitudinal section of flower with peltate placenta extracted. **D.** Three-flowered dichasium and cluster of dichasia. **E.** Flower bud, placenta with ovules extracted and longitudinal section of bud. **F.** Flower bud from side; calyx with apical protuberances, these evident in G and H also. **G.** Opening flower from side; two views of an anther, one showing terminal gland and two smaller glands below. **H.** Young fruit from side. **I.** Twig with fruits; apical view of fruit with calyx and staminal ring having fallen. **J.** Seed. **K.** Twig with leaves and fruit; view of fruit apex with calyx having fallen and staminal ring persisting. **L.** Cluster of seeds from a fruit and two individual seeds showing flat and rounded sides. (A–C from Pirani & Kallunki 2664, ASU0014404; D from Nuñez 8602, ASU0014407; E from Smith 9729, ASU0014343; F–G from Landrum 6524, ASU0005024; H from Landrum 6518, ASU0005010; I–J from Guillen & Lazo 4340, ASU0015601; K–L from Landim 561, ASU0014337). See map of distribution in Figure 77B. Illustration by Bobbi Angell.

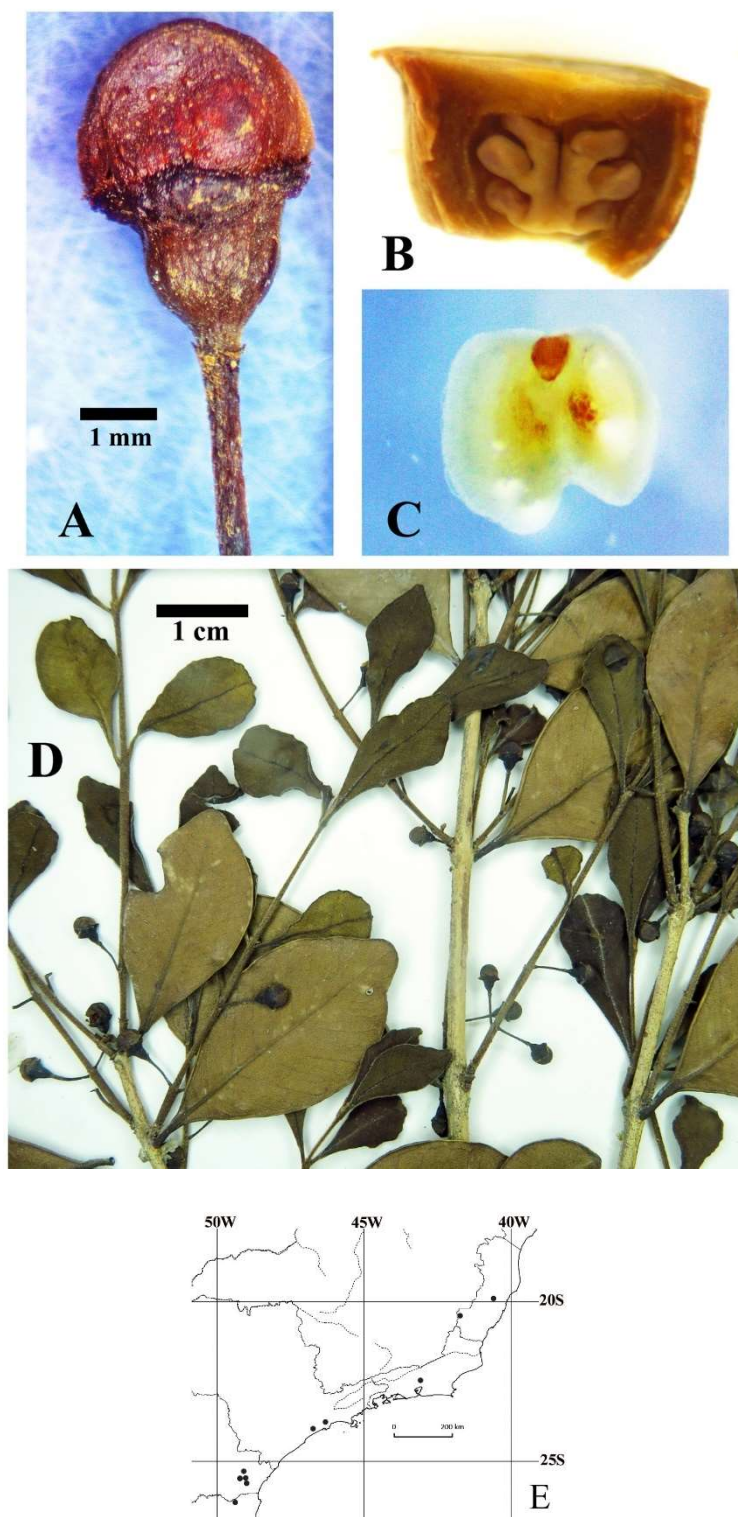


Figure 51. *Psidium ovale*: **A.** Closed flower bud, showing calyx as an expanded rim around the base of the closed corolla. **B.** Longitudinal section of ovary showing placenta with 6 ovules. **C.** Anther with terminal gland only, the brown areas below are uncleared portions of anther. **D.** Portion of herbarium sheet, showing leaves and flower buds arising from basal nodes on young twigs. **E.** Map of distribution (scale = 200 km). (All photos from *Landrum 2371*, ASU0015604).

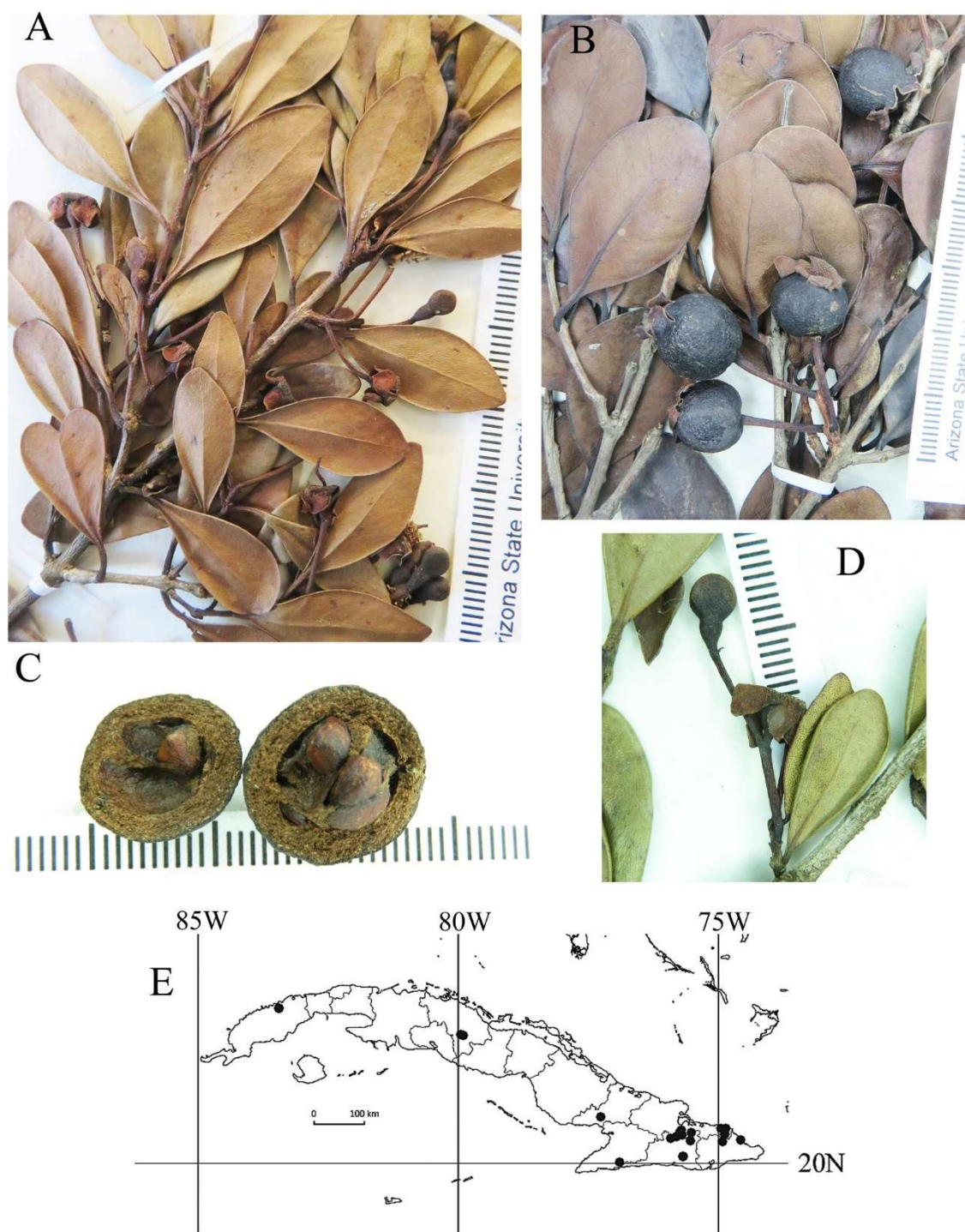


Figure 52. *Psidium parvifolium*: **A.** Twigs with leaves, buds, and flowers past anthesis. **B.** Twigs with leaves and fruits. **C.** Open fruit showing seeds. **D.** Part of a 3-flowered dichasial inflorescence, the central flower past anthesis, the left flower in bud. **E.** Map of distribution (scale = 100 km). (A from Bisse 44046, JE; B from Bisse & Lippold 18109, JE; C from Alain & Clemente 978, US; D from Acuña 12614, US).

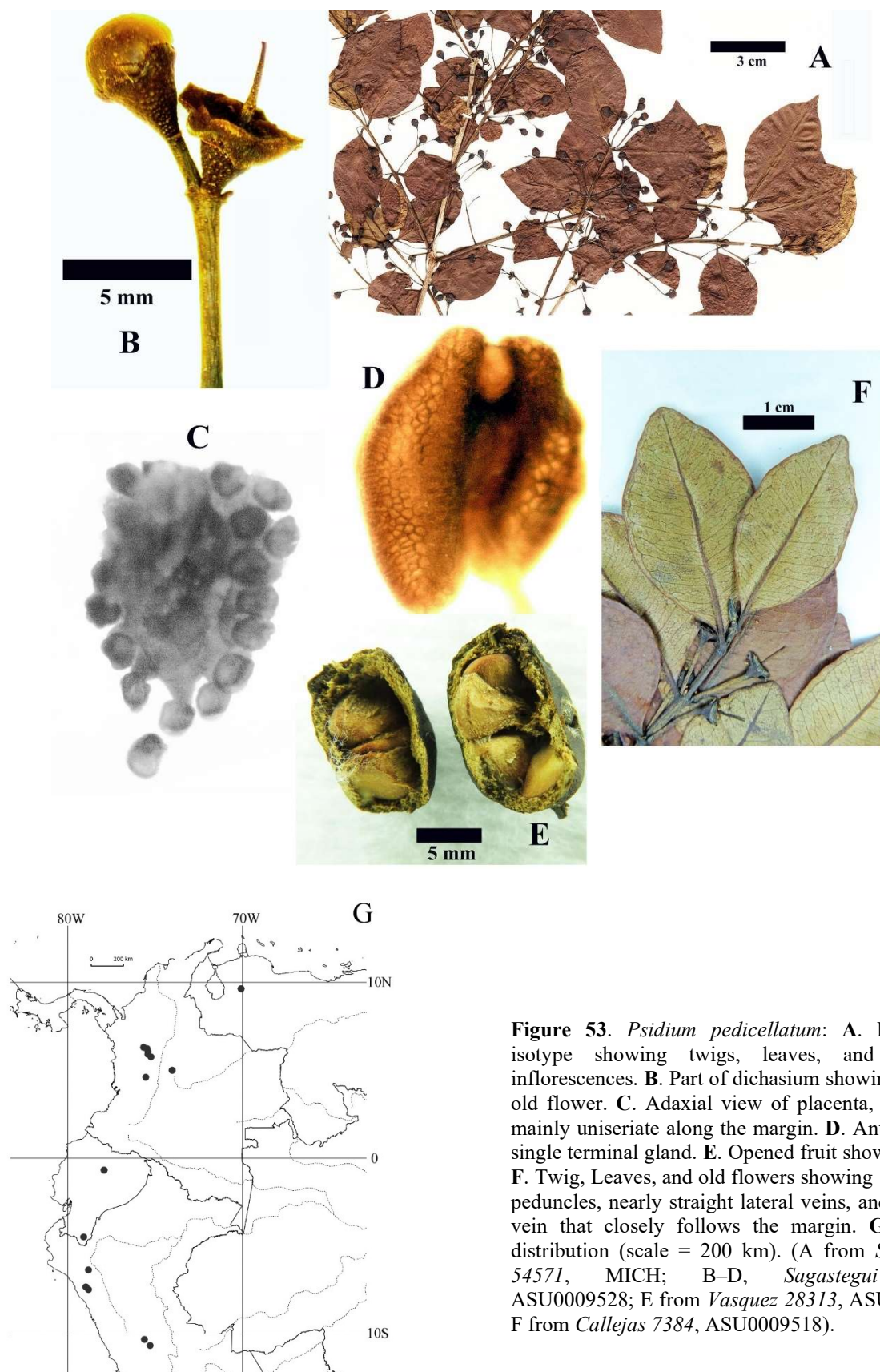


Figure 53. *Psidium pedicellatum*: **A.** Portion of isotype showing twigs, leaves, and dichasial inflorescences. **B.** Part of dichasium showing bud and old flower. **C.** Adaxial view of placenta, the ovules mainly uniseriate along the margin. **D.** Anther with a single terminal gland. **E.** Opened fruit showing seeds. **F.** Twig, Leaves, and old flowers showing 1-flowered peduncles, nearly straight lateral veins, and marginal vein that closely follows the margin. **G.** Map of distribution (scale = 200 km). (A from *Steyermark* 54571, MICH; B–D, *Sagastegui* 15020, ASU0009528; E from *Vasquez* 28313, ASU0009513; F from *Callejas* 7384, ASU0009518).

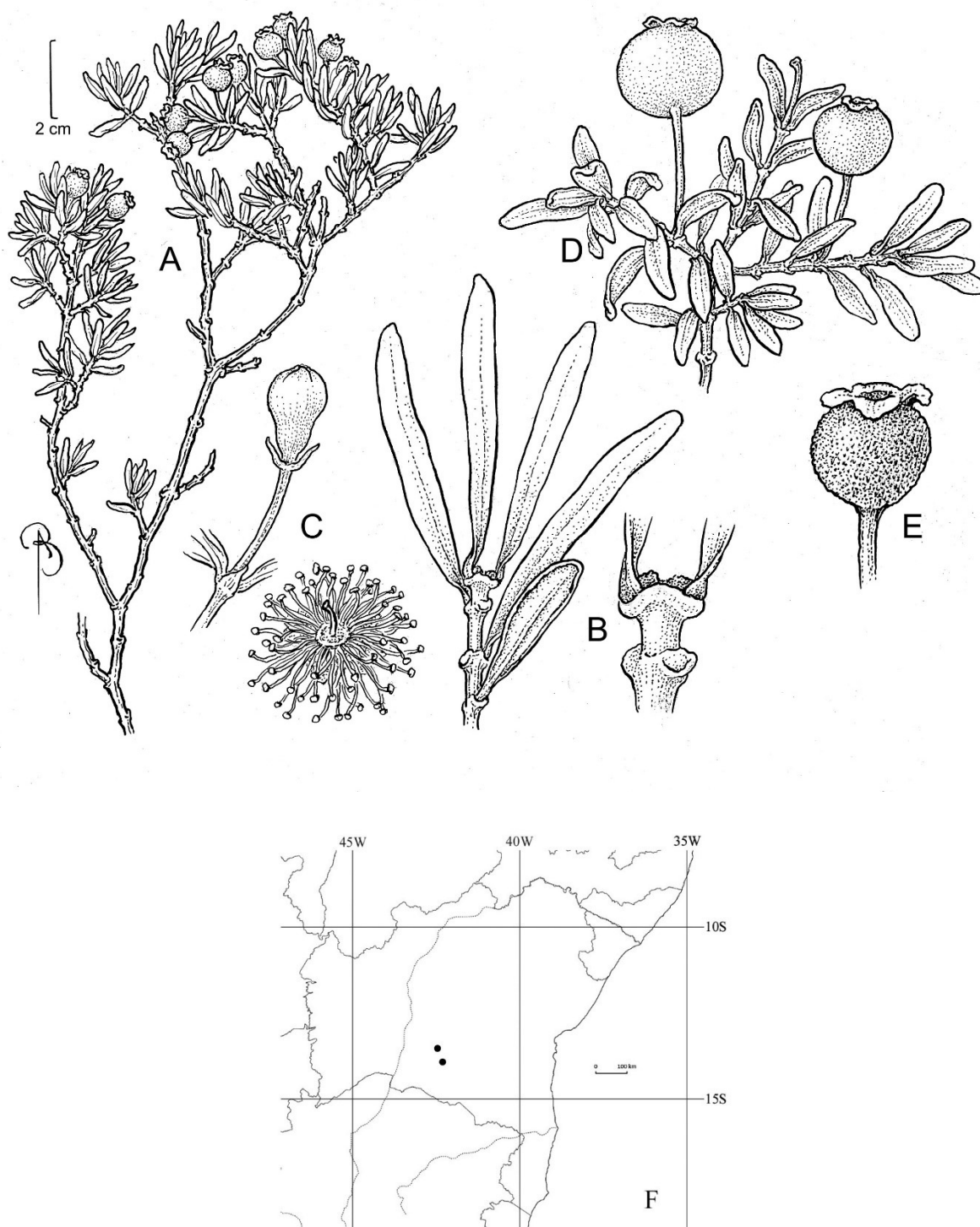


Figure 54. *Psidium pulcherrimum*: **A.** Young branch with leaves and fruits. **B.** Close up of dried twigs and leaves showing revolute margin of dried leaves and swollen nodes. **C.** Flower bud and open flower from above (bracteole ca. 1 mm long). **D.** Twig with leaves and fruits. **E.** Mature fruit (0.5–1 cm in diameter) with calyx remnants. **F.** Map of distribution (scale = 100 km). (A, D & E from photo of *Costa 20*, HUEFS-257764; B from *Andrade & Cavada s.n.*, SPF; C from photo of *Costa 21*, RB). Illustration by Bobbi Angell.

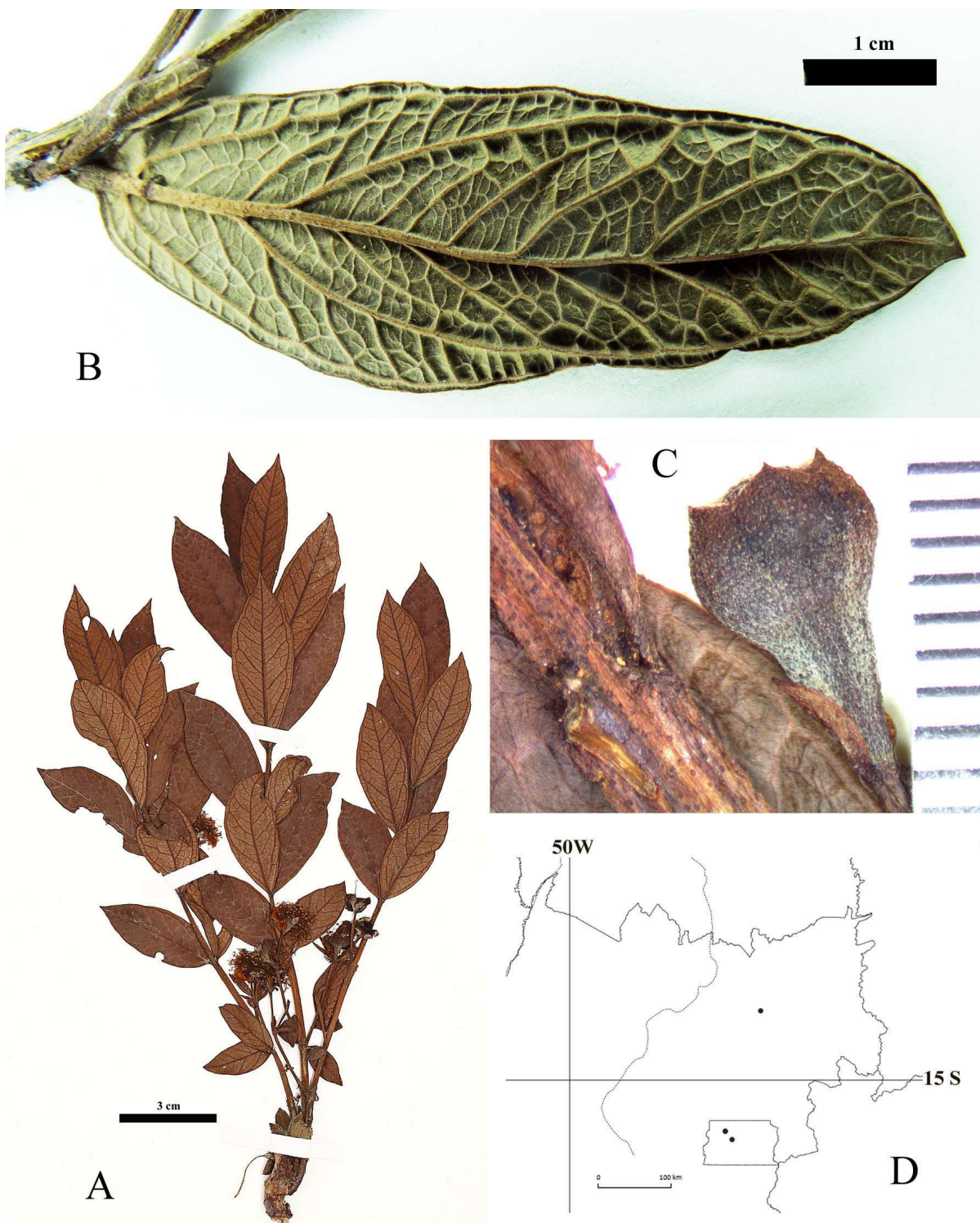


Figure 55. *Psidium ratterianum*: **A.** Portion of herbarium sheet showing woody base, stems, leaves, and flowers. **B.** Close-up photo of lower surface of leaf showing raised veins. **C.** Close-up photo of closed flower bud. **D.** Map of distribution (scale = 100 km). (A from *Paula-Souza* 8631, SPF; B from *Faria* 2191, ASU0082970; C from *Faria* 2190, ASU0078794).

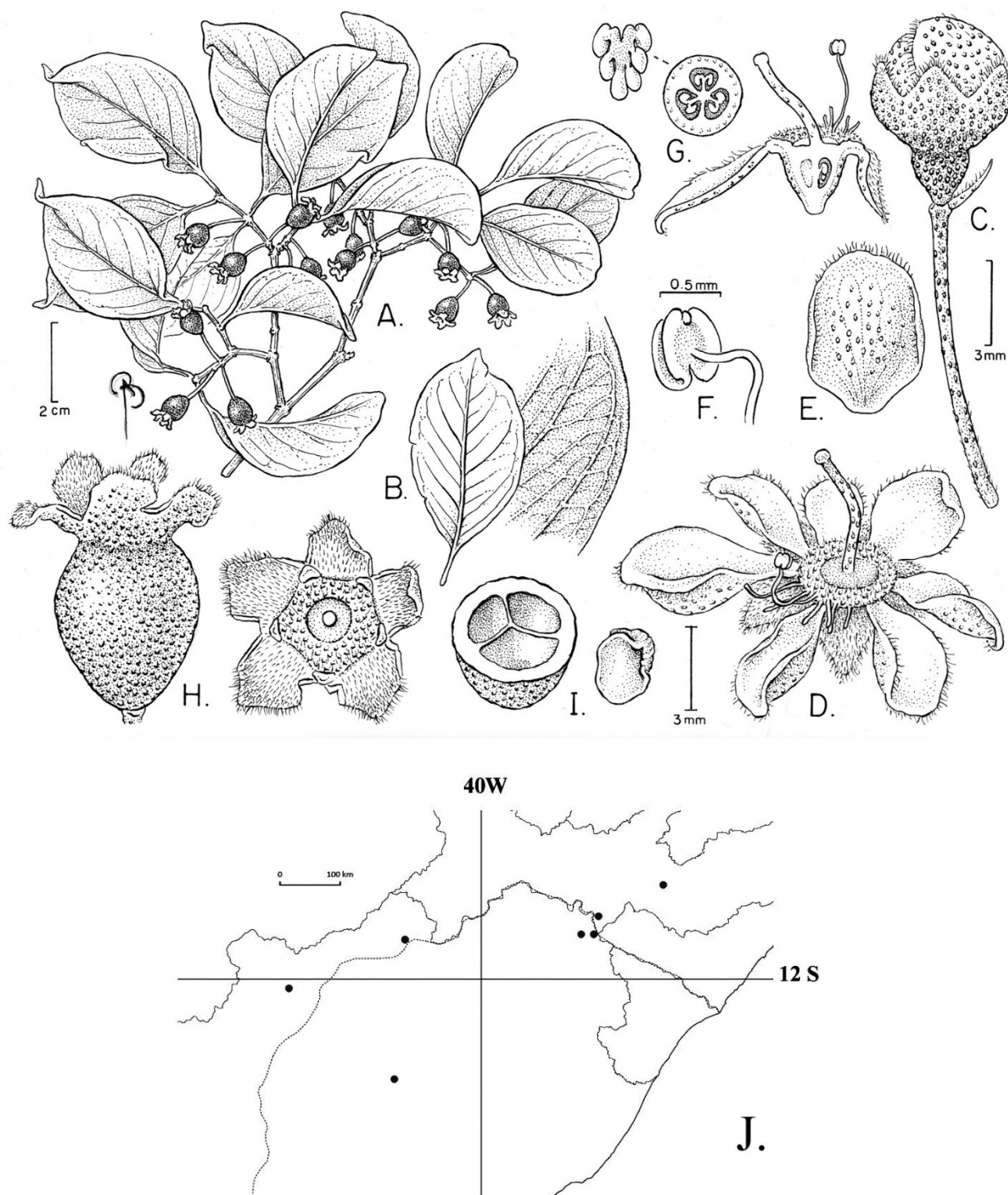


Figure 56. *Psidium rhombeum*: A. Fruiting branch. B. Typical leaf with close-up of tertiary venation pattern. C. Flower bud with one bracteole having fallen. D. Open flower near end of anthesis with 7 petals (abnormal). E. Petal. F. Anther with a terminal gland. G. Longitudinal section of old flower; cross section of ovary, with placenta and ovules extracted. H. Young fruit from side and above. I. Cross section of fruit with one immature seed. J. Map of distribution (scale = 100 km). (A, B, H & I from Moraes 626, ASU0008243 C–G from Queiroz 8075, ASU0057058). Illustration by Bobbi Angell.

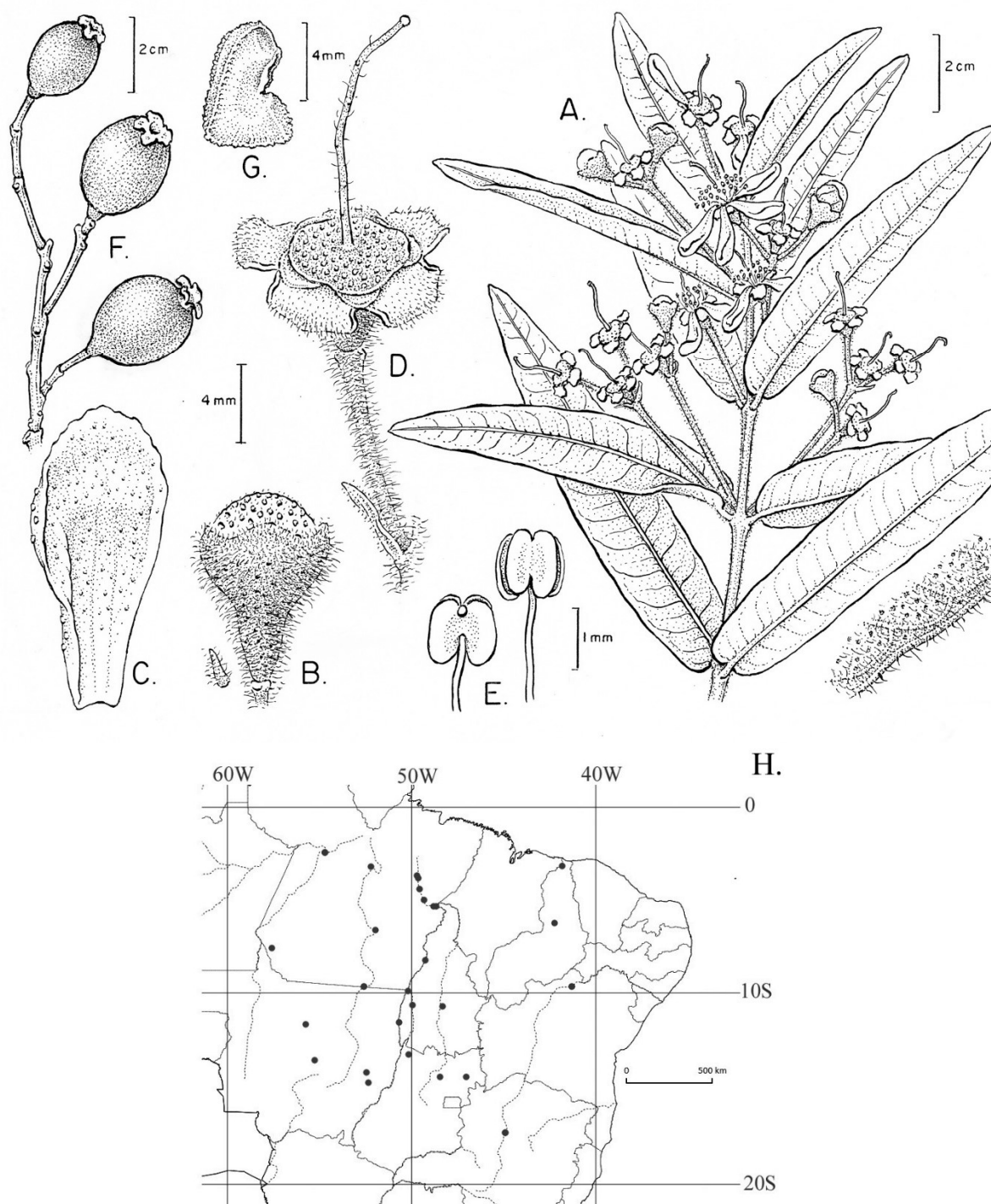


Figure 57. *Psidium riparium*: **A.** Flowering branch with dichasial inflorescences; close-up of margin on lower right. **B.** Flower bud with detached bracteole. **C.** Petal. **D.** Flower after anthesis showing tears between calyx lobes not penetrating the staminal ring. **E.** Two views of anther with terminal gland. **F.** Fruits on remnants of inflorescence. **G.** Seed, showing angular shape. **H.** Map of distribution (scale = 500 km). (A–E from Santos *et al.* 133, ASU0008248; F & G from da Silva *et al.* 4200, ASU0008253). Illustration by Bobbi Angell.

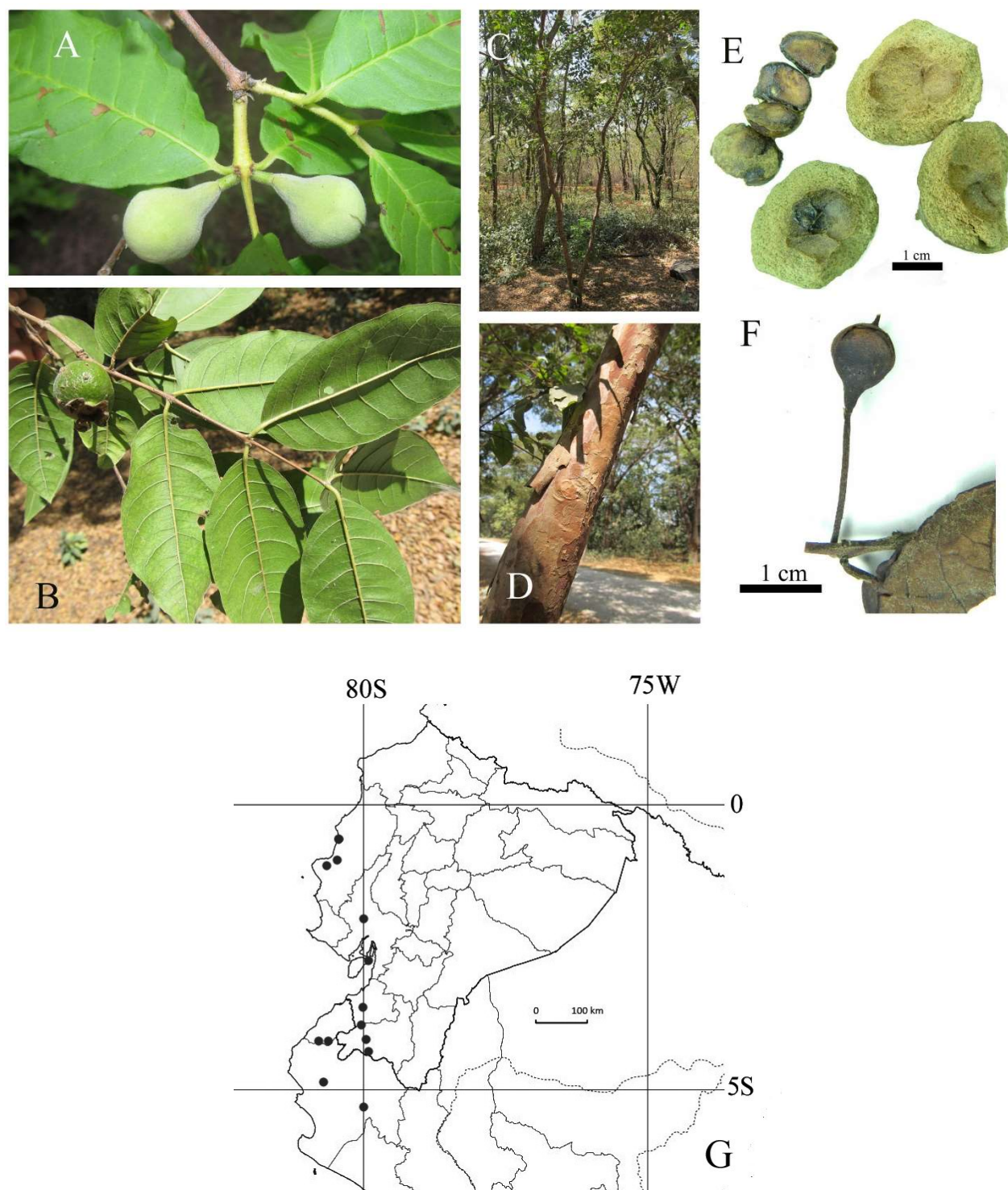


Fig. 58. *Psidium rostratum*: **A.** Flower buds. **B.** Twig with leaves and fruit. **C.** Group of small trees. **D.** Bark of trunk. **E.** Opened, thick-walled fruit and seeds. **F.** Flower bud with rostrum. **G.** Map of distribution (scale = 100 km). A–D, photos by X. Cornejo of plants growing wild. (A from Cornejo 8777, ASU0096793; B–D from Cornejo 8829, ASU0108259; E from Cornejo 8852, ASU0108382; F from Diaz *et al.* 2732, ASU0077647).

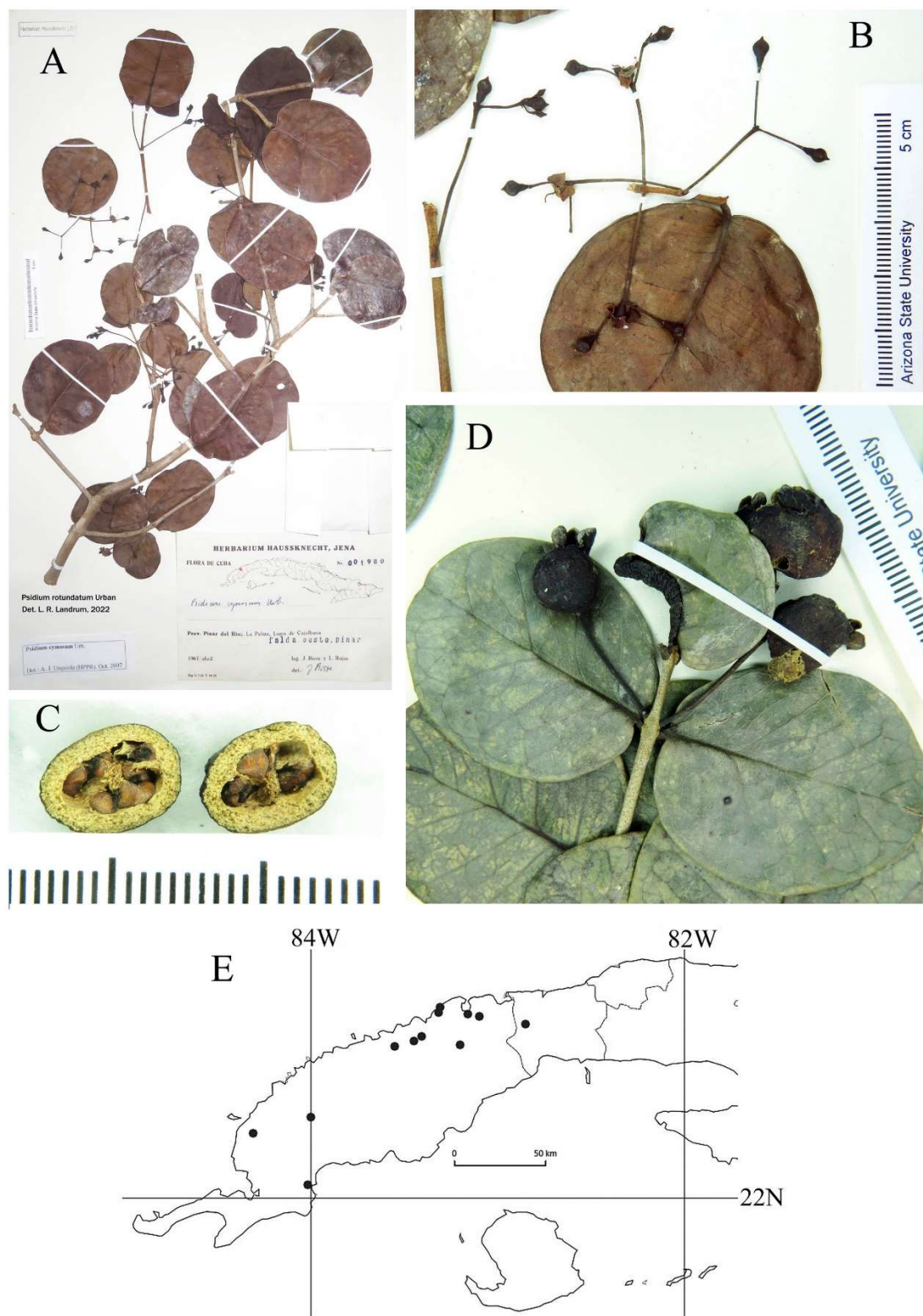


Figure 59. *Psidium rotundatum*: **A.** Herbarium sheet. **B.** Dichasial inflorescences. **C.** Open fruit with seeds. **D.** Twig with leaves and fruits. **E.** Map of distribution (scale = 50 km). (A & B from Bisse 1980, JE; C from Ekman 17395, NY; D from Bisse & Rojas 4578, JE).

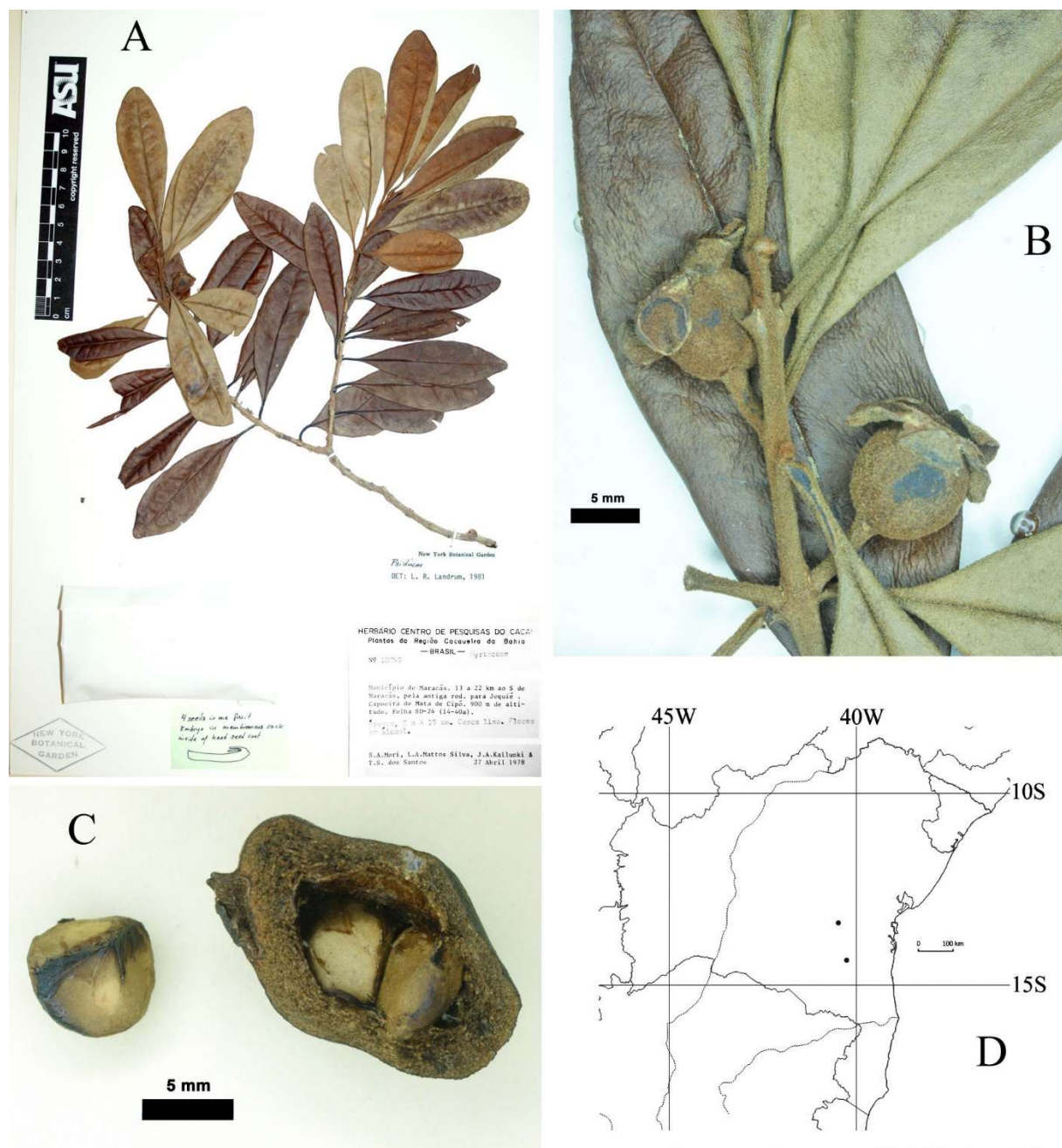


Figure 60. *Psidium rotundidiscum*: A. Herbarium sheet. B. Close up of young fruits. C. Section of nearly mature fruit and seeds; seeds have rounded side facing fruit wall and generally flat sides where seeds abut each other. D. Map of distribution (scale = 100 km). (A & B from Mori *et al.* 10049, NY, isotype; C from Mori *et al.* 10049, CAS, isotype).

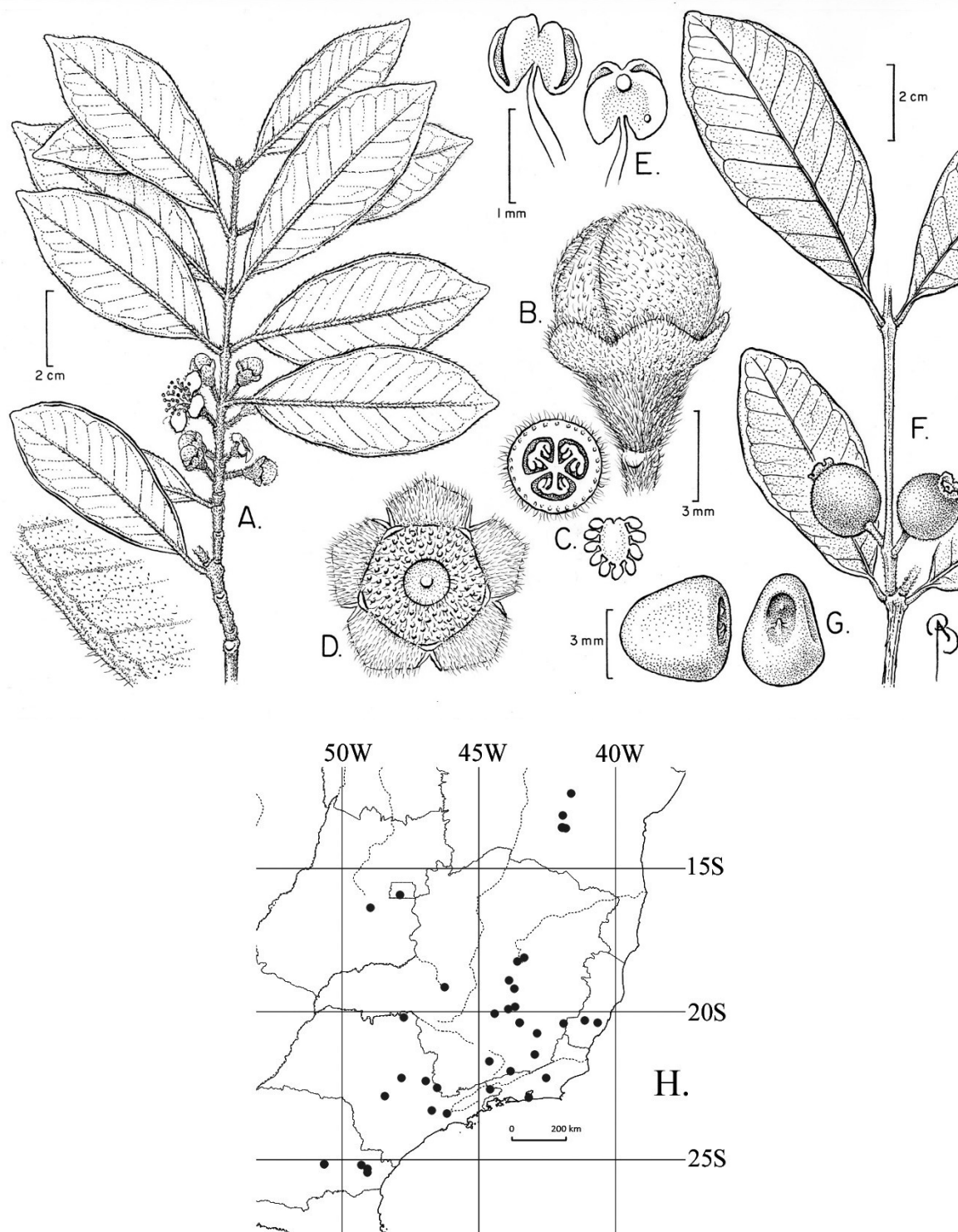


Figure 61. *Psidium rufum*: **A.** Twig with leaves, flower buds, and open flower. **B.** Closed flower bud. **C.** Cross section of ovary showing three locules and peltate placenta; extracted peltate placenta with ovules. **D.** Summit of ovary and calyx lobes after anthesis. **E.** Anther with a terminal gland and second smaller gland below; in second view the glands are not visible. **F.** Twig with leaves and two fruits. **G.** Two views of a seed. **H.** Map of distribution (scale = 200 km). (A–E from Harley *et al.* 25891, ASU0008271; F from da Silva 1908, ASU0008265; G from Harley 24582, ASU0008273). Illustration by Bobbi Angell.

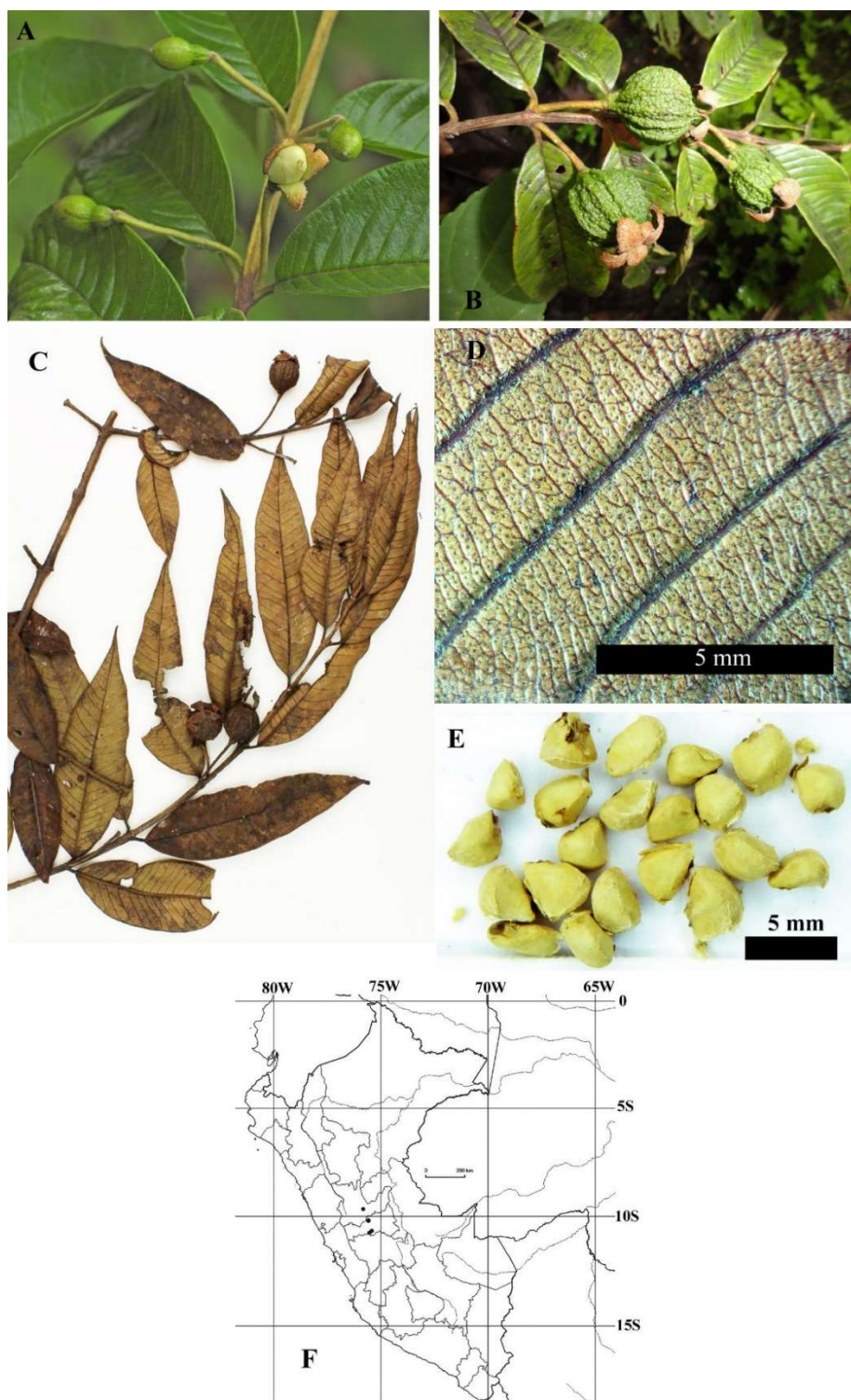


Figure 62. *Psidium rutidocarpum*: **A.** Vegetative growth with flower buds and opening flower; **B.** Vegetative growth and young fruits. **C.** Portion of herbarium specimen showing leaf shape. **D.** View of secondary and tertiary veins. **E.** Seeds. **F.** Map of distribution (scale = 200 km). (A & B, photos by R. Rojas from Estación Biológica Huampal, Peru; C from Valenzuela & Mateo 13403, ASU0076116; D from Gentry *et al.* 39844, ASU0008279; E from Woytkowski 6406, MICH).

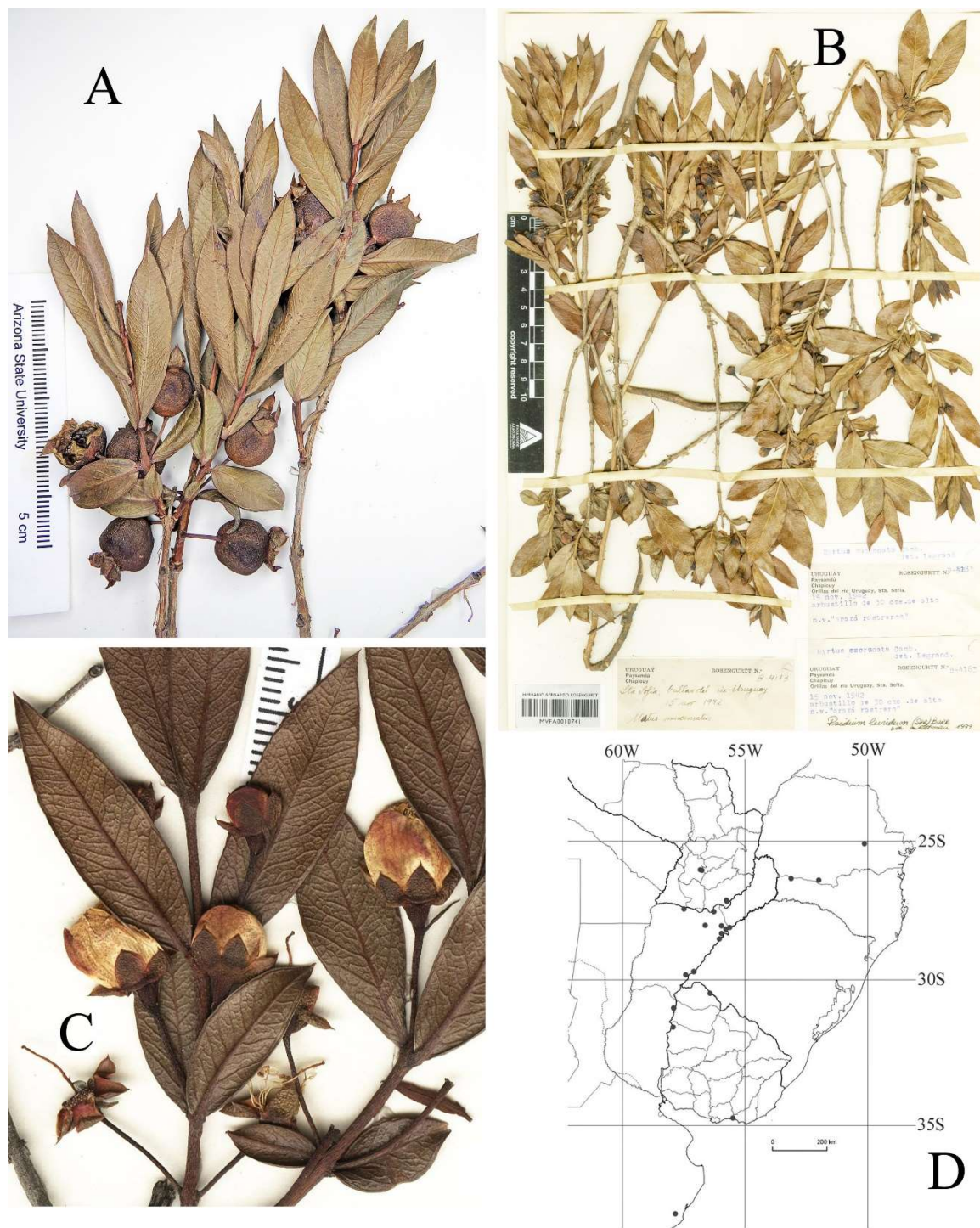


Figure 63. *Psidium salutare* var. *cuspidatum*: **A.** Twigs with leaves and fruits. **B.** Neotype herbarium sheet of *Myrtus luridum*. **C.** Twigs with leaves and flowers. **D.** Map of distribution (scale = 200 km). Note that leaves are narrowly elliptic to oblanceolate, have mucronate tips, and visible venation on both surfaces, and the calyx lobes are sharply acute. (A from *Solis Neffa* 242, ASU0015534; B from *Rosengurt* B-4183, MVFA0010741; C from *Landrum* 3856, NY).

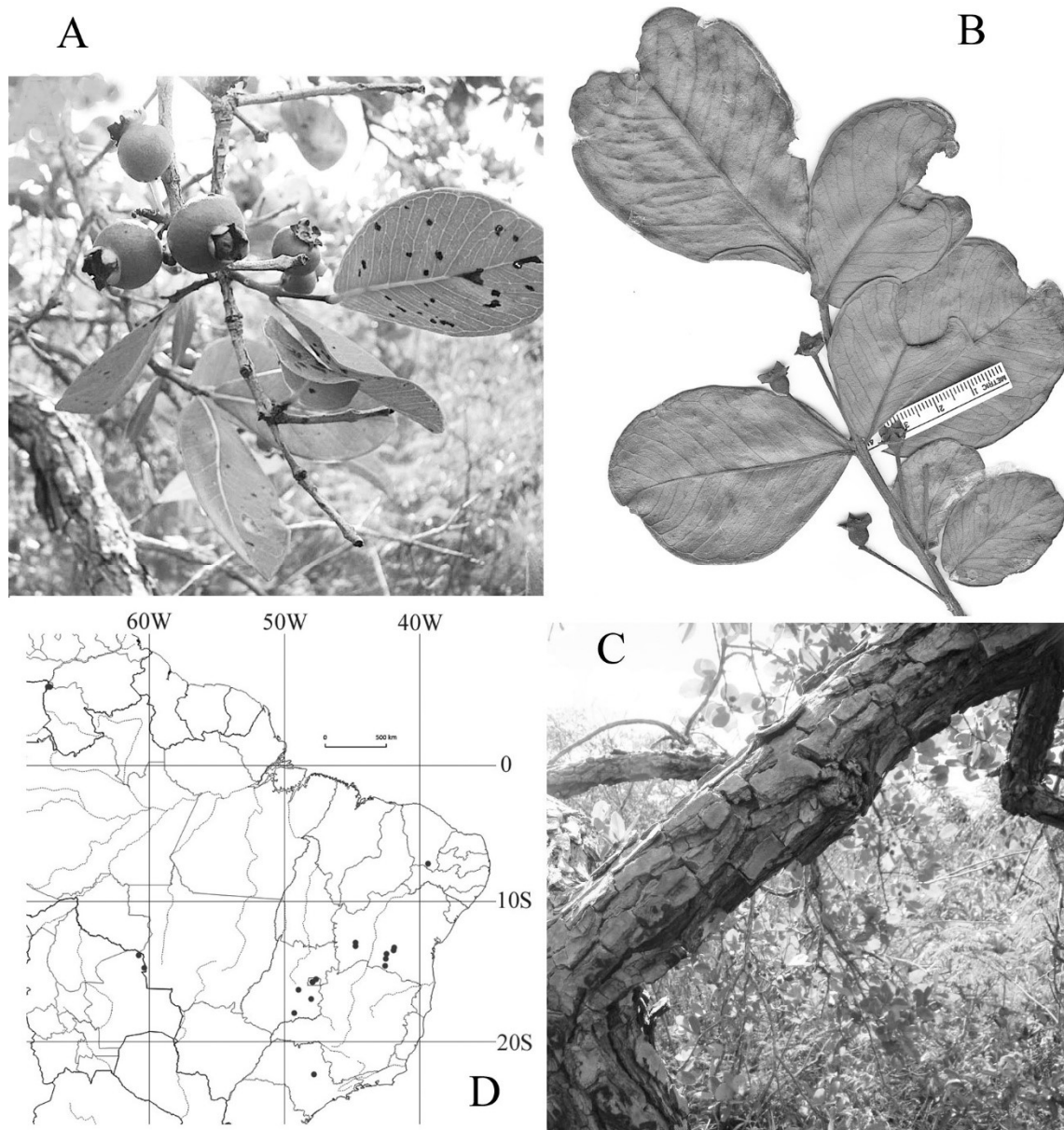


Figure 64. *Psidium salutare* var. *pohlianum*. **A.** Young branch with fruits. **B.** Twig with very young fruits. **C.** Stem showing rough bark. **D.** Map of distribution (scale = 500 km). (A & C, photos by M. Alves of *Roque et al.* 3363, photo specimen at ASU0075034; B from *Irwin et al.* 9101, NY).

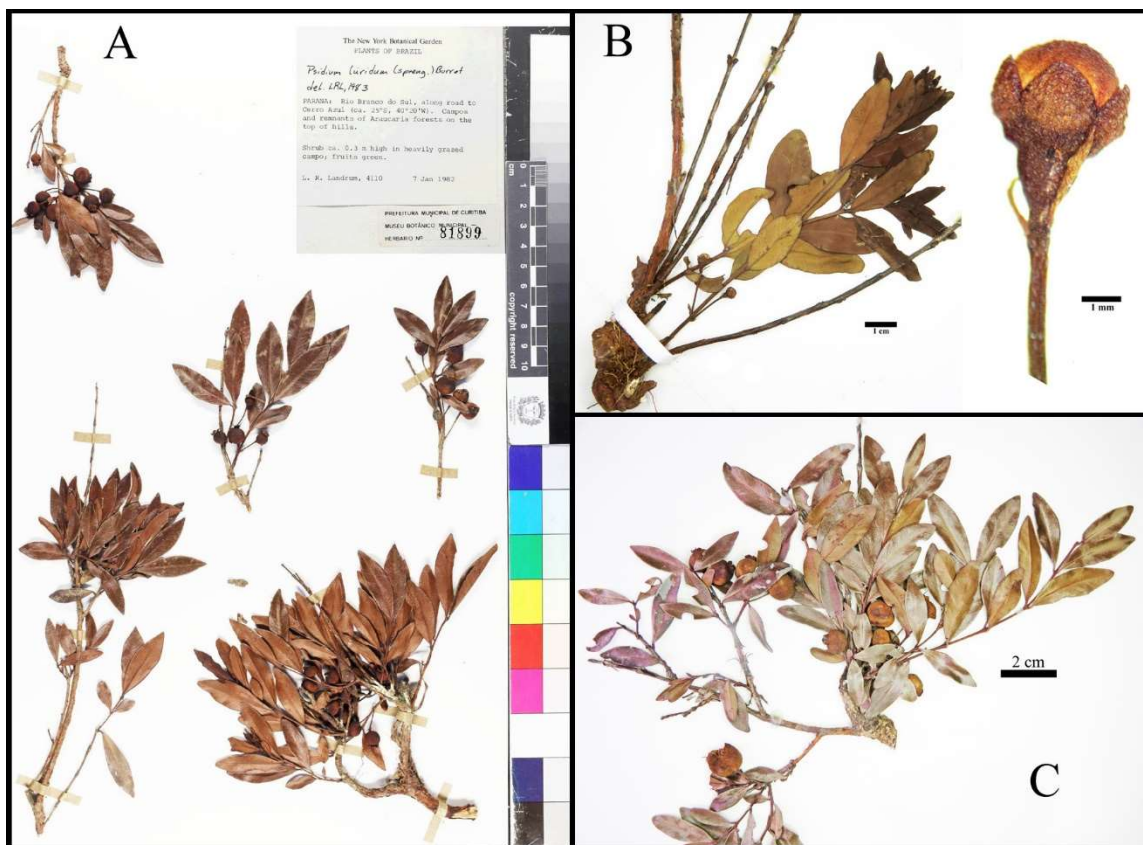


Figure 65. *Psidium salutare* var. *resiliens*: **A.** Holotype herbarium sheet. **B.** Plant with woody base, old burnt stems and new stems having sprouted from base; close-up of flower bud. **C.** Specimen with woody base, stems with leaves and fruits. **D.** Map of distribution (scale = 200 km). (A from holotype, Landrum 4110, MBM; B from Proença 1458, ASU0015561; C from Ribas & Barbosa 3166, ASU0015531).

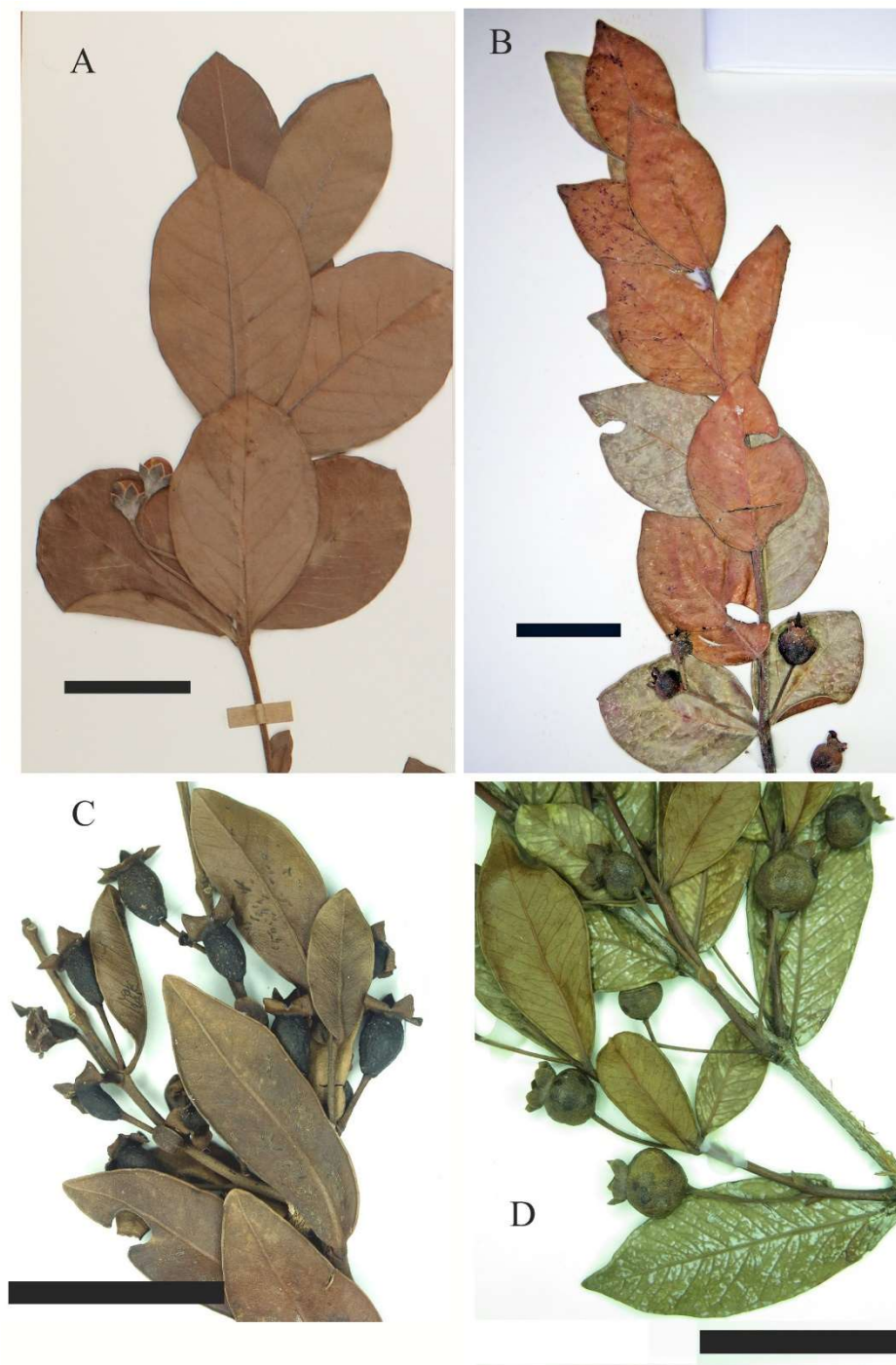


Figure 66. Parallel variability in *Psidium salutare* var. *salutare* in South America (A & C) and Central America (B & D). **A.** Twig with leaves and flowers from Paraná, Brazil. **B.** Twig with young fruits from Honduras. **C.** Twig with young fruits from Paraguay. **D.** Twig with young fruits from Honduras. All bars 3 cm long. (A from *Hatschbach* 44564, MBM; B from *Landrum* 6520, ASU0005036; C from *Zardini* 45687, ASU0060391; D from *Landrum* 6480, ASU0005037).

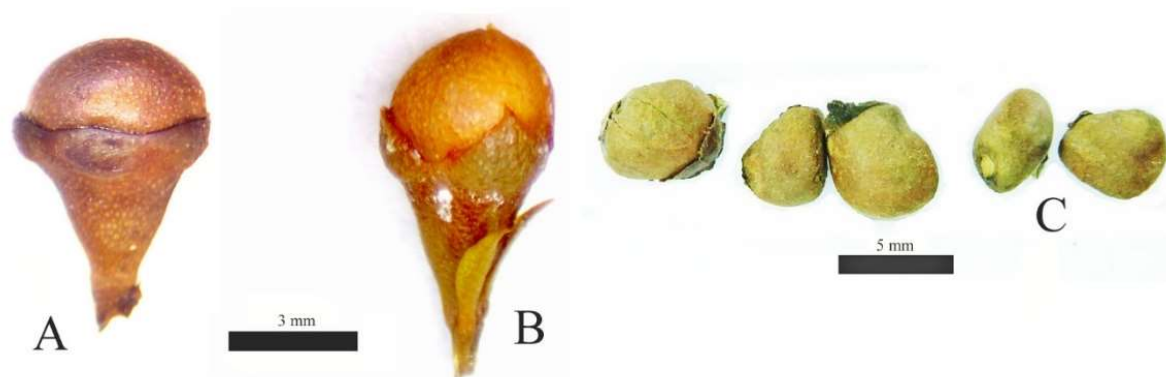


Figure 67. *Psidium salutare* var. *salutare*: **A.** Flower bud with broad, rounded calyx lobes. **B.** Flower bud with triangular calyx lobes. **C.** Seeds from one fruit. (A from *da Silva* 1880, ASU0015567; B from *Velasco* 40043, ASU0306780; C from *Zardini* 47698, ASU0304784).

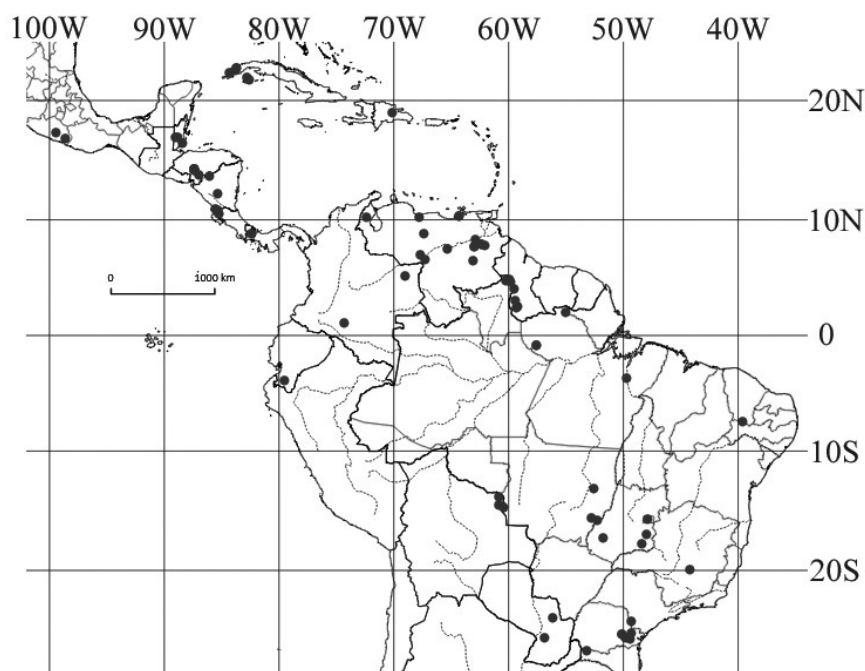


Figure 68. Distribution of *Psidium salutare* var. *salutare* (scale = 1000 km).

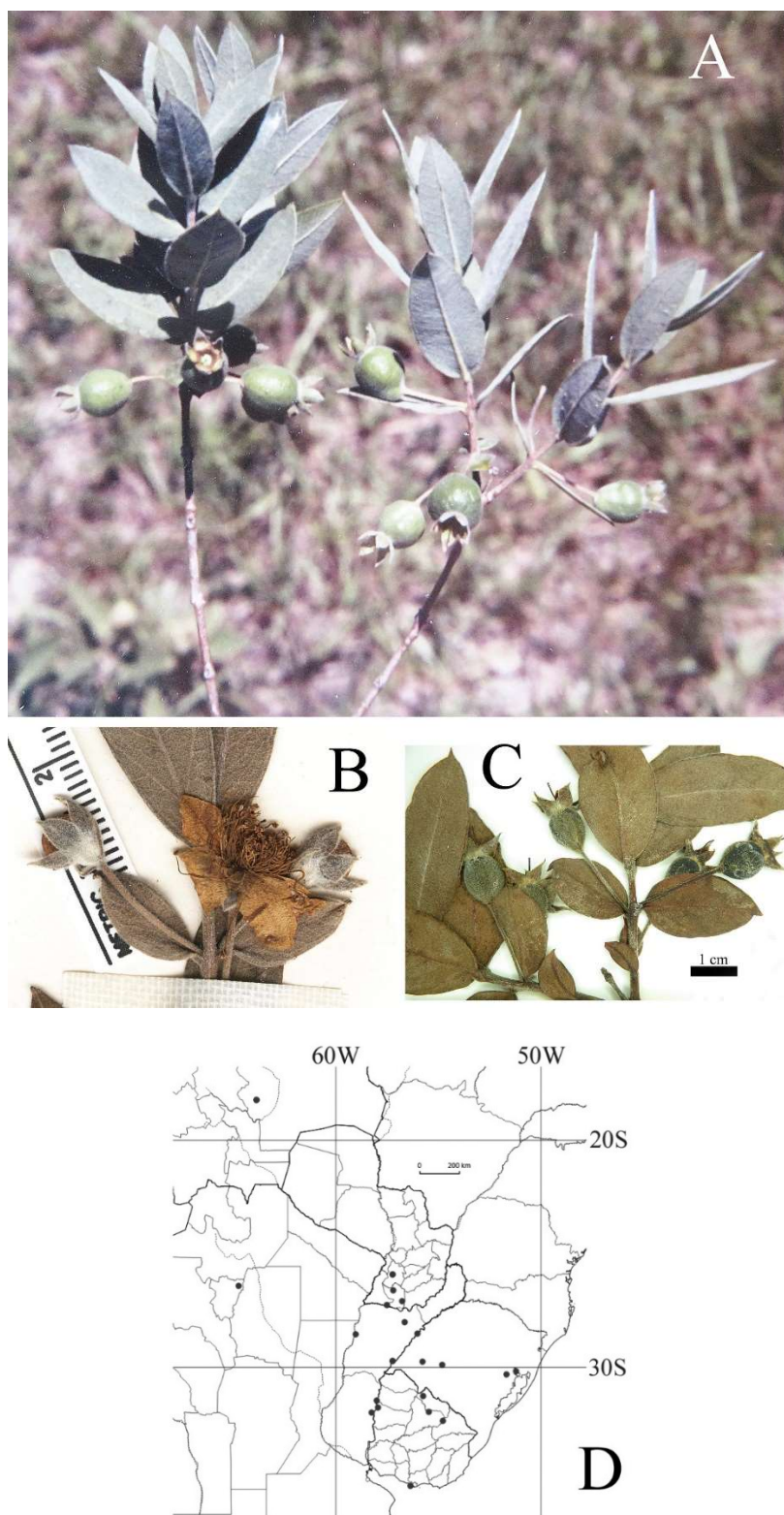


Figure 69. *Psidium salutare* var. *sericeum*: **A.** Field photo from Arroyo Sta. Isabela, General Paz, Corrientes, Argentina. **B.** Twig with leaves and flowers. **C.** Twig with leaves and young fruits. **D.** Map of distribution (scale = 200 km). (A & C from *Landrum* 5701, ASU0015532; B from *Venturi* 7582, F).

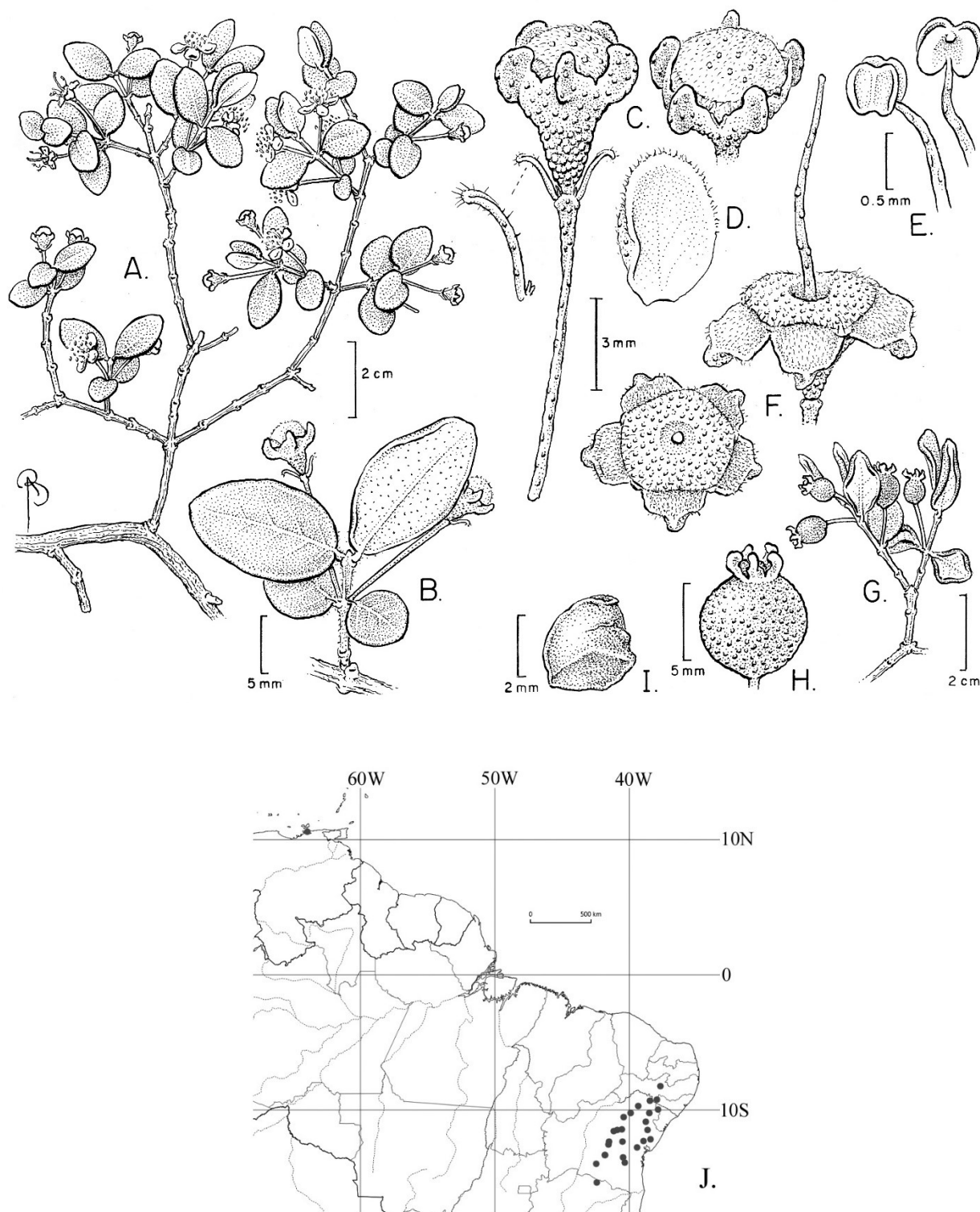


Figure 70. *Psidium schenckianum*: **A.** Flowering branch. **B.** Twig with flower buds and leaves with obscure venation and revolute margins. **C.** Flower buds, the beginning of tears between the calyx lobes evident on right bud. **D.** Petal with ciliate margin. **E.** Two views of an anther with a terminal gland. **F.** Flowers after anthesis showing tears between calyx lobes not penetrating the staminal ring. **G.** Twig with fruits. **H.** Fruit showing persistent calyx. **I.** Seed showing flat and rounded sides. **J.** Map of distribution (scale = 500 km). (A–F from *Cardoso 900*, ASU0057593; G–I from *Miranda 760*, ASU0015714). Illustration by Bobbi Angell.

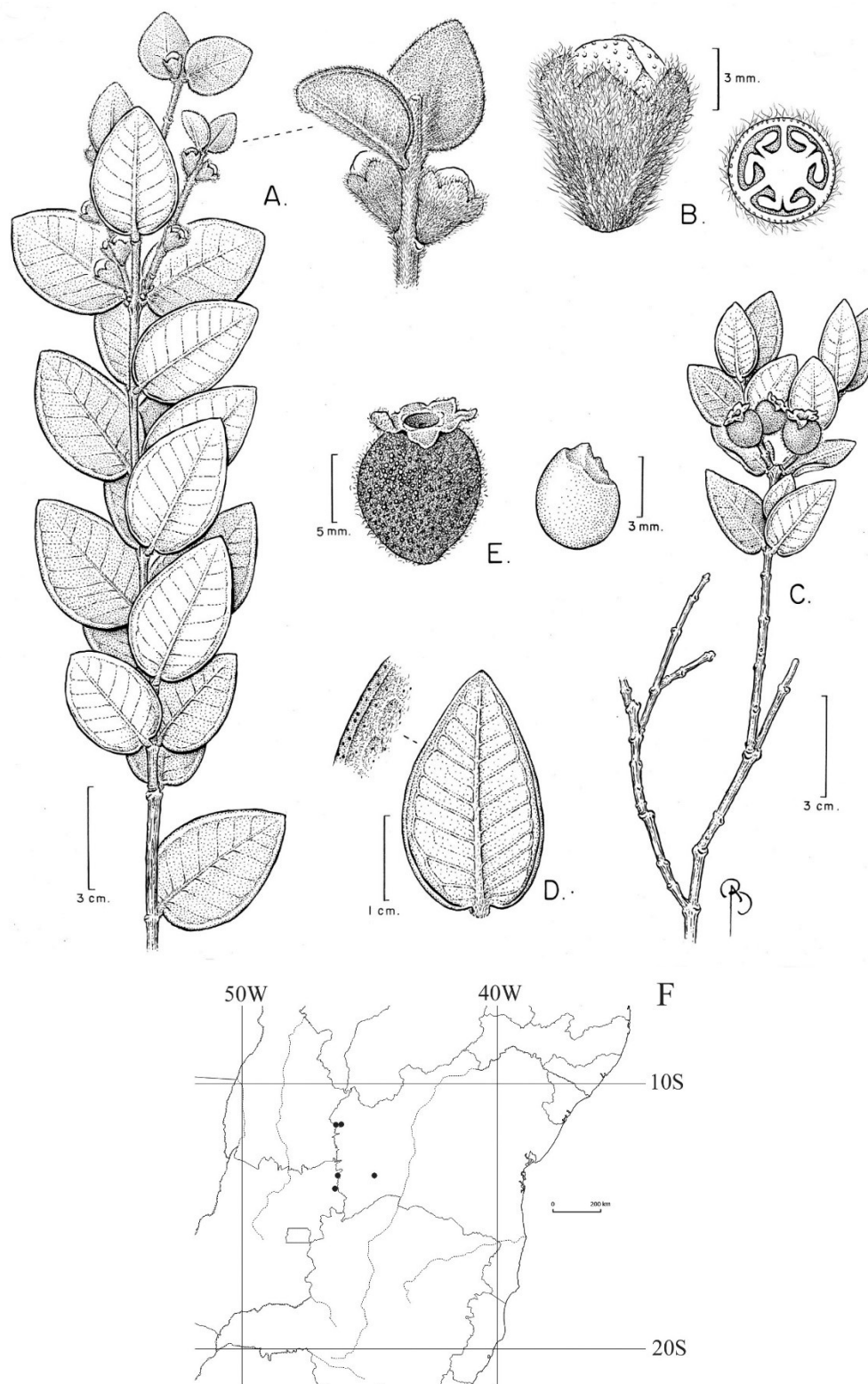


Figure 71. *Psidium sessiliflorum*. **A.** Branchlet with flower buds with detail on right. **B.** Flower bud without bracteoles and cross section of ovary. **C.** Branchlets with sessile fruits. **D.** Lower surface of leaf with enlarged portion of margin. **E.** Fruit and seed. **F.** Map of distribution (scale = 200 km). (A, B from *Passos et al.* 359, HUEFS; C–E from *Silva et al.* 1383, RB.) Illustration by Bobbi Angell.

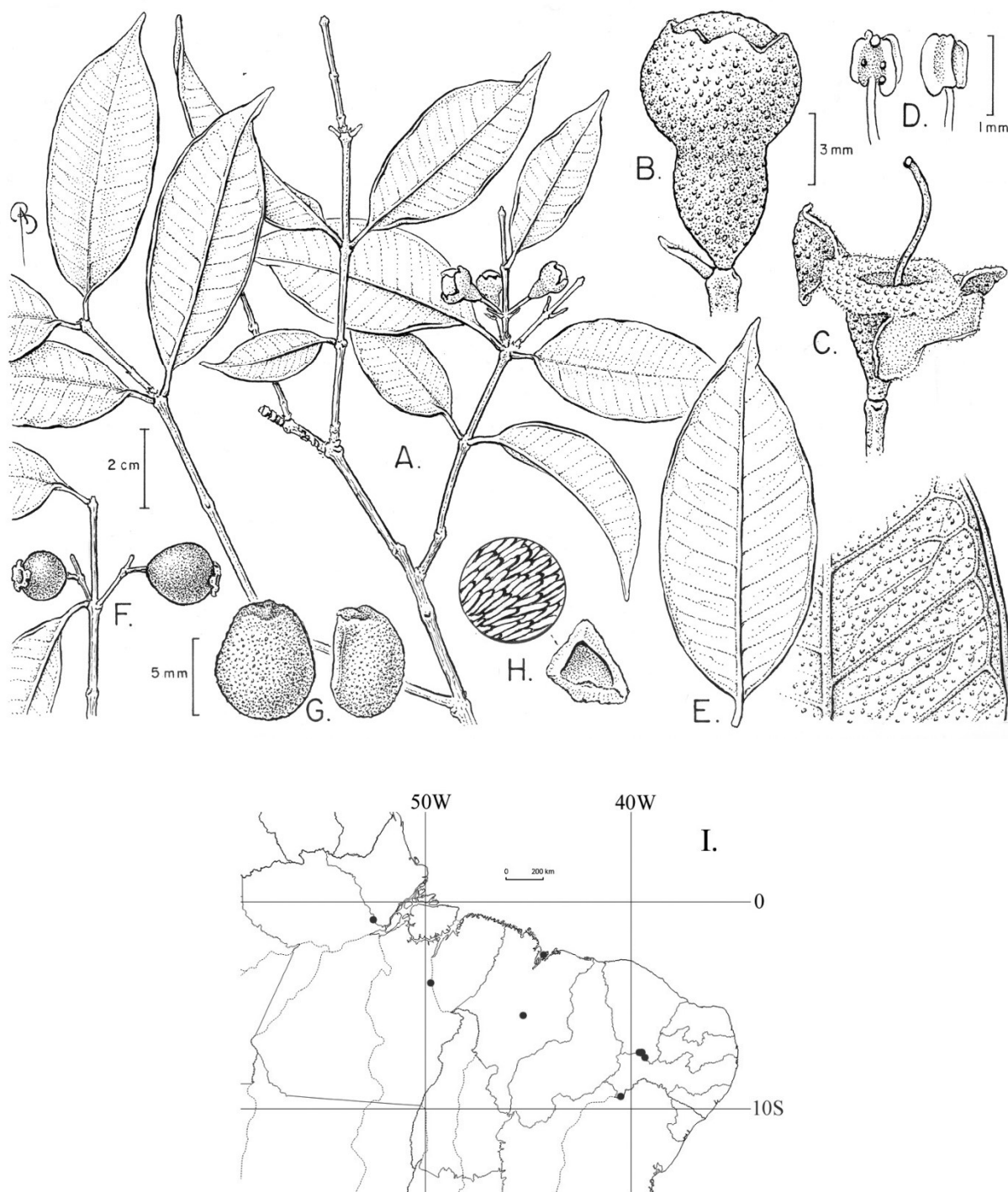


Figure 72. *Psidium sobralianum*: **A.** Flowering branch. **B.** Bud with one bracteole having fallen. **C.** Flower after anthesis. **D.** Two views of anther, showing terminal gland and smaller glands below. **E.** Typical leaf and close-up of dendritic tertiary veins and numerous glands. **F.** Fruits on remnants of bracteate shoots. **G.** Seeds with rounded sides exposed and one flat side barely exposed. **H.** Portion of seed coat and close-up of dense elongate cells typical of *Psidium*. **I.** Map of distribution (scale = 200 km). (A & B drawn from Lima *et al.* 54, isotype, ASU0082461; C drawn from field photos by Lima from type locality; D & E drawn from Santos *et al.* 733, ASU0082463; F & H drawn from Silva 1157, MICH, NY.) Illustration by Bobbi Angell.

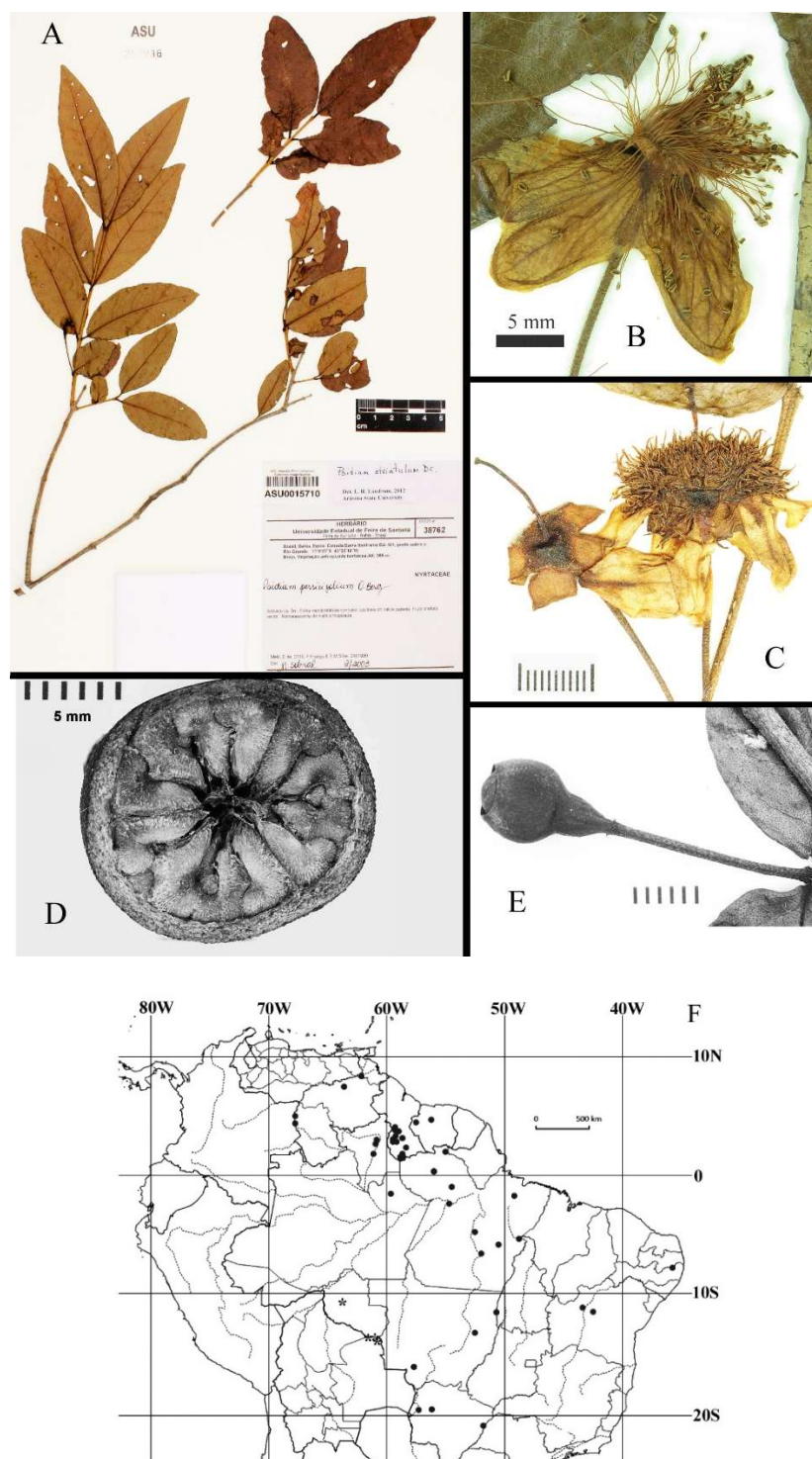


Figure 73. *Psidium striatulum*: **A.** Herbarium sheet from Bahia. **B.** Flower of *P. striatulum* var. *striatulum* with small oblong anthers. **C.** Flowers of *P. striatulum* var. *rondoniense* with elongate, attenuate anthers. **D.** Cross Section of fruit showing arrangement and shape of seeds. **E.** Flower bud with a terminal pore. **F.** Map of distribution (scale = 500 km); ● var. *striatulum* (widespread in Brazil and Venezuela), * var. *rondoniense* (Bolivia and Rondônia, Brazil). (A from Melo *et al.* 2715, ASU0015710; B from Görts *et al.* 336, ASU0015639; C from Zarucchi 2722, NY; D from Davis 807, NY; E from Ferreira 9638, ASU0015627).

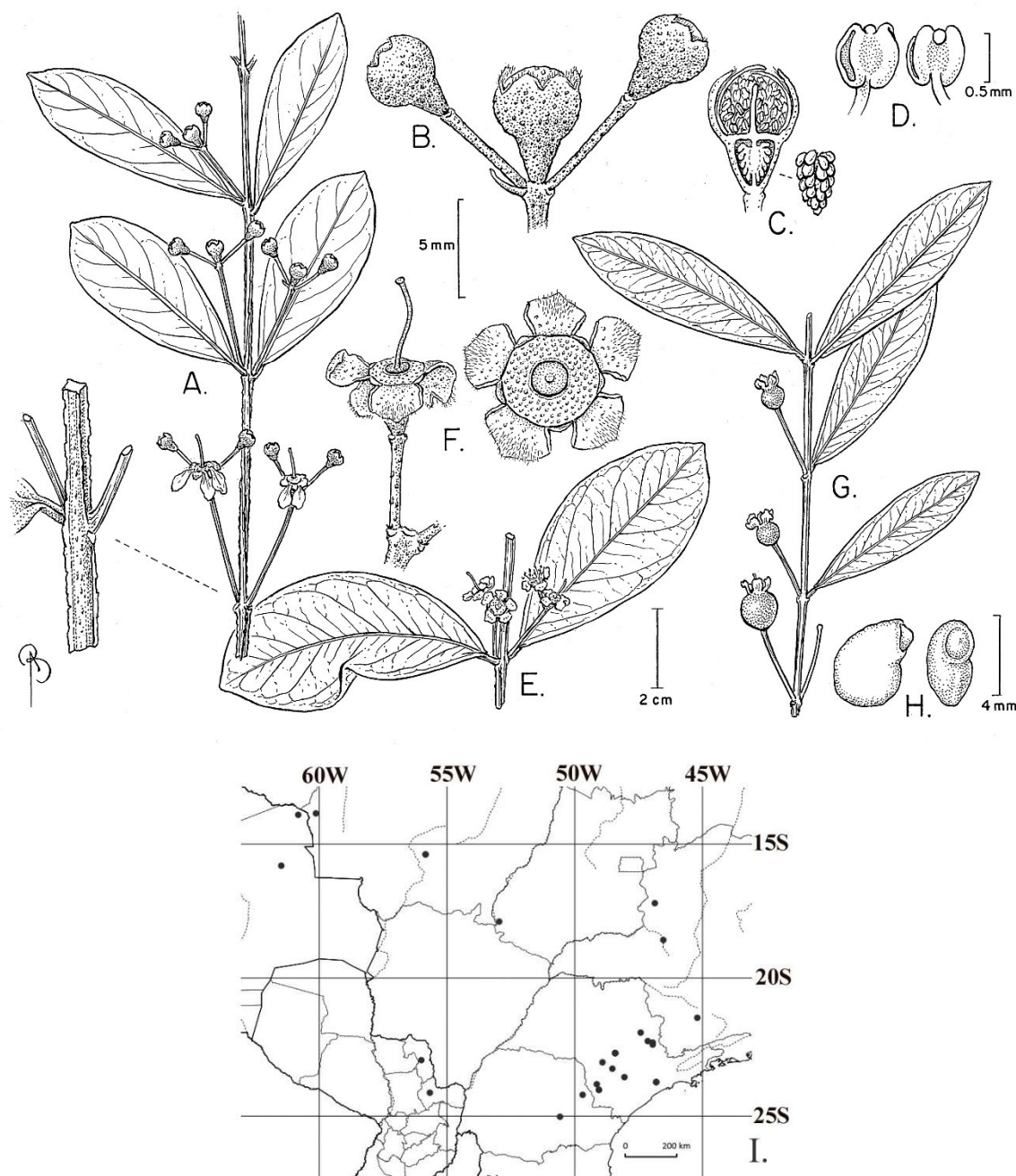


Figure 74. *Psidium suffruticosum*: **A.** Branch with leaves and dichasial inflorescences; detail of winged twigs. **B.** Dichasial 3-flowered inflorescence with flowers at various stages (flower buds have the calyx nearly closed at first). **C.** Longitudinal section of flower with ovules extracted. **D.** Two views of anther with a single terminal gland. **E.** Node with two leaves and remnants of two dichasia. **F.** Flower after anthesis showing tears between calyx lobes. **G.** Twig with fruits. **H.** Two views of seed with prominent operculum. **I.** Map of distribution (scale = 200 km). (A–D from *Gottsberger 11-121079*, ASU0005191; E & F from *Hatschbach 50322*, ASU0005426; G & H from *Souza et al. 10752*, ASU0005420). Illustration by Bobbi Angell.

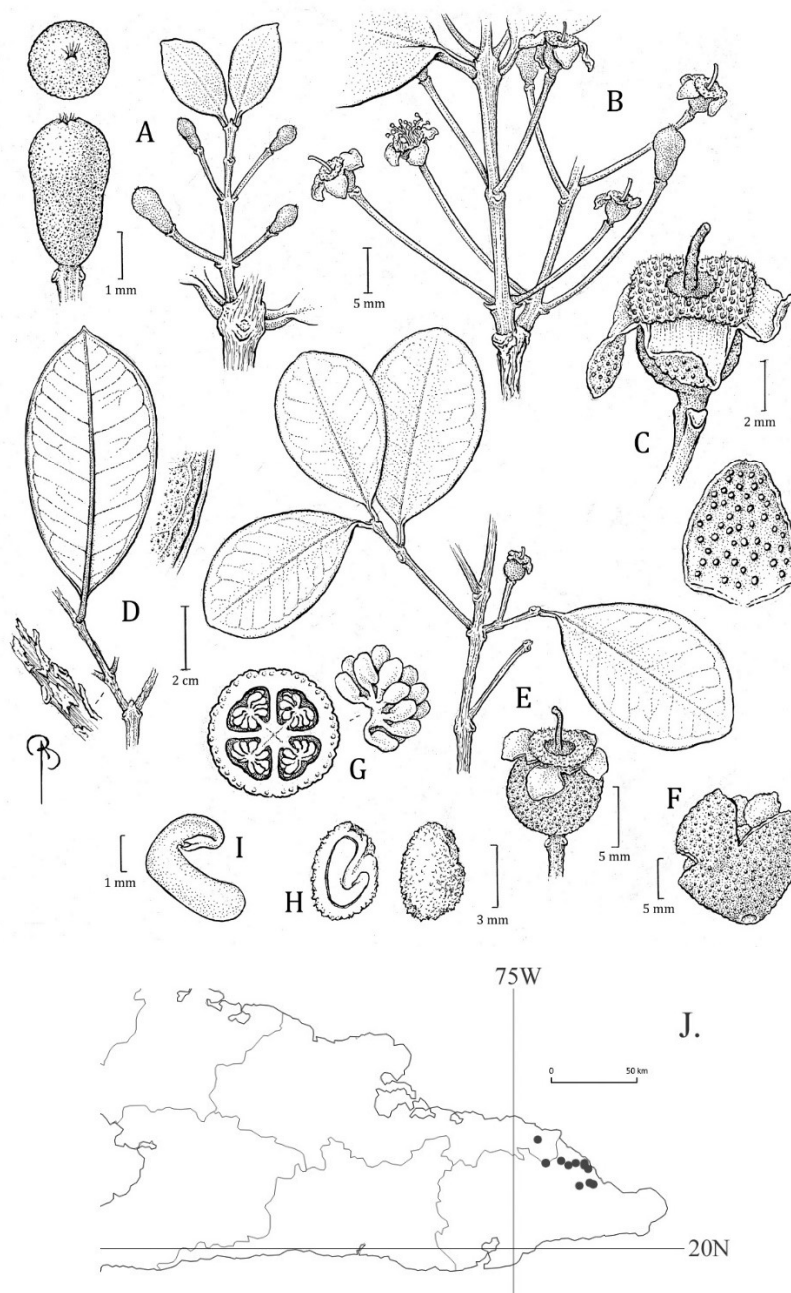


Figure 75. *Psidium urquiolanum*: **A.** Closed flower bud from side and above, showing apical pore in closed calyx with small hairs protruding; young leafy shoot with flower buds at first two nodes. **B.** Two older shoots with one closed bud and flowers at first two nodes. **C.** Flower after anthesis, with enlarged calyx remnant showing external glandular surface. **D.** Twig and leaf, with enlarged part of margin and twig; venation more evident than usual. **E.** Developing fruit on branchlet with leaves attached. **F.** flattened mature fruit, with seeds emerging. **G.** Cross section of ovary showing 4 locules with peltate placentas with ovules; one placenta extracted with ovules. **H.** Seed in section showing C-shaped inner cavity with embryo in place. **I.** Extracted embryo with reflexed cotyledons. **J.** Map of distribution (scale = 50 km). (A–C & G from *Bisse 21450*, JE; D & E from *Urquiola 7108*, ASU0060189; F from *Álvarez et al. 27137*, JE; H, I from *Bisse 6818*, JE). Illustration by Bobbi Angell.

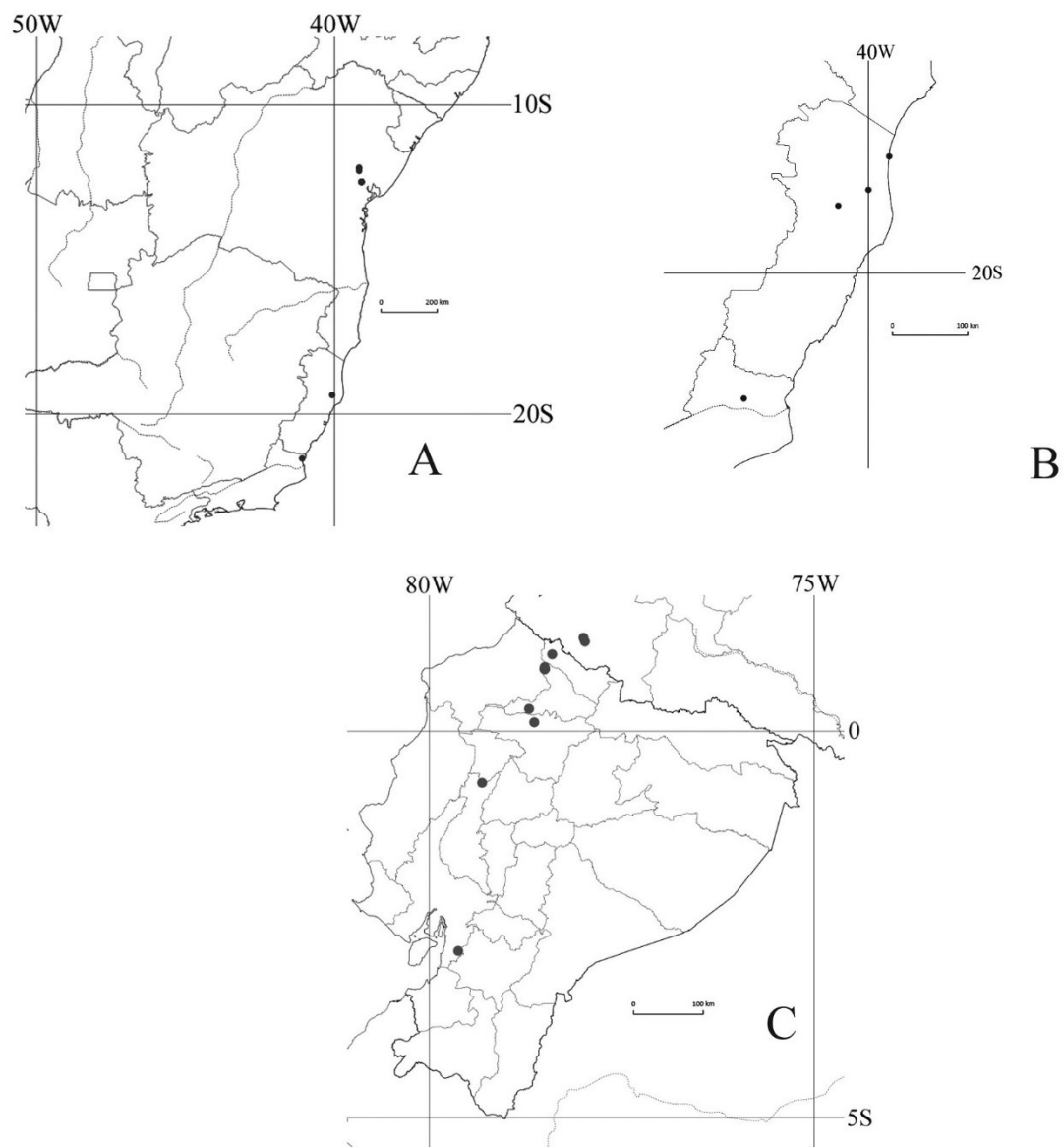


Figure 76. Maps of distribution: **A.** *Psidium cauliflorum* (scale = 200 km); **B.** *P. graziae* (scale = 100 km); **C.** *P. occidentale* (scale = 100 km).

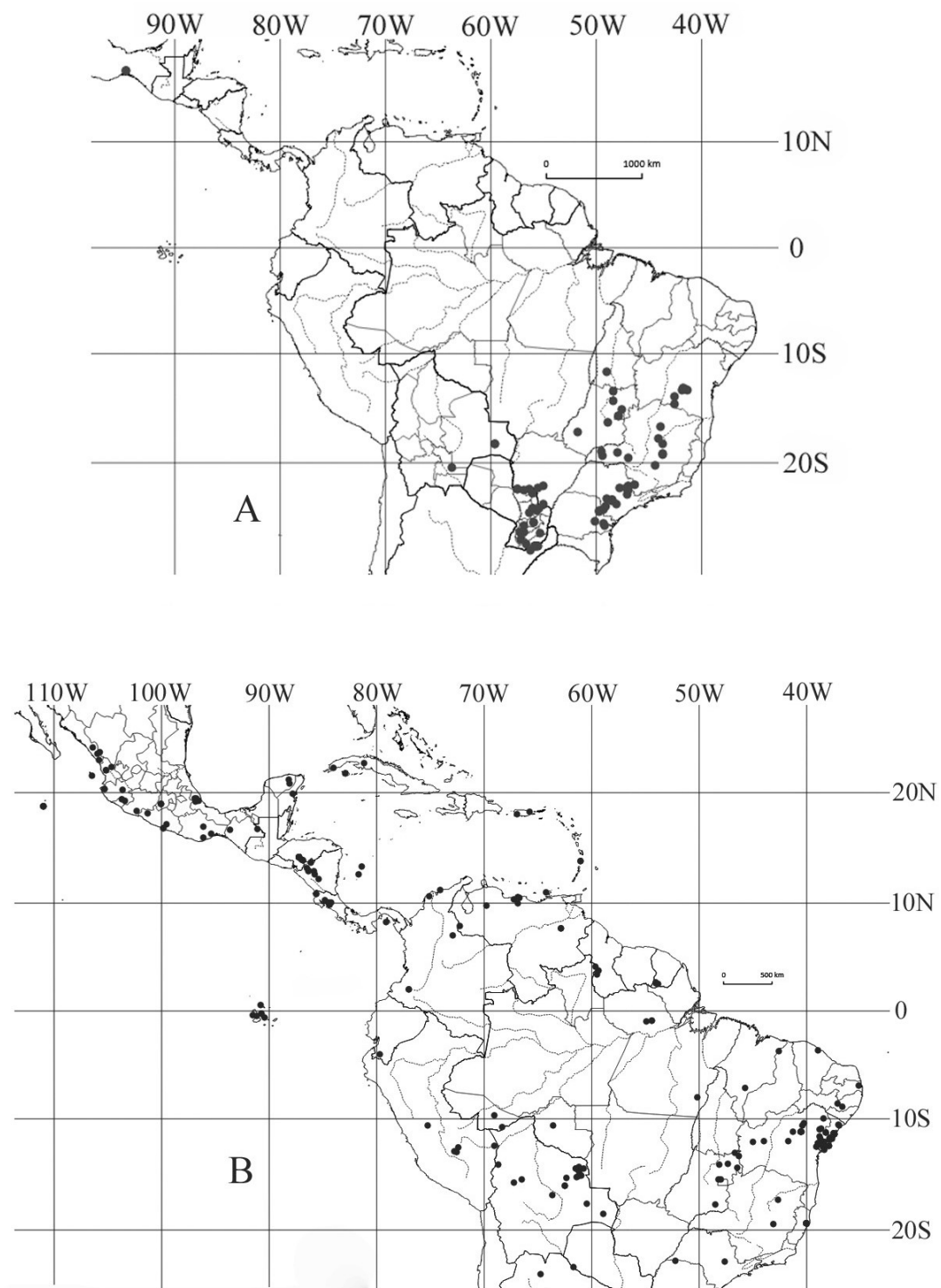


Figure 77. Maps of distribution: **A.** *Psidium grandifolium* (scale = 100 km); **B.** *P. oligospermum* (scale = 500 km).